"A STUDY TO ASSESS THE EFFECTIVENESS OF INDIVIDUALIZED COUNSELING ON COMPLIANCE TO POST DIALYSIS INSTRUCTIONS AND OUTCOME OF HEMODIALYSIS AMONG PATIENTS UNDER GOING REGULAR HEMODIALYSIS IN A SELECTED HOSPITAL AT KERALA"

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"A study to assess the effectiveness of Individualized Counseling on compliance to post dialysis instructions and outcome of Hemodialysis among patients undergoing regular Hemodialysis in a selected hospital at Kerala"

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ABSTRACT

A study to assess the effectiveness of Individualized Counseling on compliance to post dialysis instructions and outcome of Hemodialysis among patients undergoing regular Hemodialysis in a selected hospital at Kerala.

The aim of the study is to assess whether individualized counseling improves the compliance to post dialysis instructions and minimizes complications during hemodialysis among the patients undergoing regular hemodialysis.

The conceptual framework of the study was based on the Health Belief Model (Glanz-2011). A Quasi experimental pre and post test control group design was used to determine the effectiveness of individualized counseling on compliance to post dialysis instructions. The sample of 60 subjects undergoing regular hemodialysis selected by non probability purposive sampling method. Samples are randomly assigned to control and the experimental group 30 in each. The data from the samples were collected by using a structured interview schedule and observational checklist. The data was analyzed using descriptive and inferential statistics.

A pretest was given to both experimental and control group. An individualized counseling with regard to importance of compliance to post hemodialysis instructions was given to the experimental group after the pre-test. During the time of the dialysis, the investigator observed the samples frequently to identify any complications occurred. Post test was conducted on the 7^{th} and 14^{th} day for experimental group and control group.

Major findings of the study were in the experimental group significant mean score differences were also seen between pre-intervention and post-intervention compliance status. Significant difference was seen in all four aspects of post hemodialysis instructions, which includes drug and follow up (t= 7^{th} day- 5.360, 14^{th} day- 6.854 df=58 $P \leq 0.05$), fluid restriction (t= 7^{th} day- 9.284, 14^{th} day-16.168 df=58 $P \leq 0.05$), diet restriction (t= 7^{th} day- 6.273, 14^{th} day-12.029 df=58 $P \leq 0.05$), exercise for the patency of AV fistula (t= 7^{th} day- 7.027, 14^{th} day-14.725 df=58 $P \leq 0.05$),and overall (t= 7^{th} day- 8.43, 14^{th} day-15.757 df=58 $P \leq 0.05$).

The degree of outcome to hemodialysis was also measured. The result showed a significant difference in the mean outcome score was in experimental group after intervention ($t=7^{th}$ day- 12.734, 14^{th} day-13.610 df=58 $P \leq 0.05$).

The study concluded that the individualized counseling had an effect on compliance to post dialysis instructions and outcome of hemodialysis among patients undergoing regular hemodialysis. It improve their compliance level and reduced the complications during and after the hemodialysis treatment.

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CHAPTER I

INTRODUCTION

BACKGROUND OF THE STUDY

Health is a fundamental human right and the world wide social goal, it is essential to the satisfaction of basic human needs and to an improved quality of life. The harmonious balance of the state of human individual integrated in his environment, constitute health, as defined by WHO. The harmonious balance of the human body is maintained by several organs, one of such organ is kidney.

Kidney is a paired bean shaped organ. It is about the size of a fist, located just below the rib cage, on either side of the spine. Nephrons are the basic units of the kidney, which filter the blood and cause wastes to be removed in the form of urine. Along with the bladder, two ureters, and the single urethra, the kidneys make up the body's urinary system.

A primary function of kidneys is the removal of poisonous wastes from the blood. In addition to remove wastes, the other functions of the kidneys includes balancing chemicals in your body, releasing hormones such as erythropoietin(which stimulates the bone marrow to make red blood cells), renin (which regulates blood pressure), calcitriol (the active form of vitamin D, which helps maintain calcium for bones and for normal chemical balance in the body), helping to control blood pressure, helping to produce red blood cells and producing vitamin D which keeps the bones strong and healthy.

We can live quite well with one kidney; some people live a healthy life even though born with one missing. A change in lifestyle and urbanization had resulted in problems like obesity, hypertension and diabetes, which are associated with increased risk of Chronic Kidney Disease. Kidney damage and decreased function lasting longer than 3 months is called chronic kidney disease (CKD), due to this the kidney's functions losses, which causes accumulation of water, waste, and toxic substances in the body, that are normally excreted by the kidney.

According to Global Burden of Disease project, diseases of the kidney and urinary tract contributes global burden of about 850,000 deaths every year and 115,010,107 disability adjusted life years. Chronic Kidney Disease is the 12th leading cause of death and 17th cause of disability. Globally, mean age of the patient with Chronic Kidney Disease is about 50 years, 70.2% of the Chronic Kidney Disease populations are males, 18.3% of the CKD population is on hemodialysis and 2.74% is on Peritoneal Dialysis **(Dr. John Aga, 2010).**

In India mean age of the patient with CKD was between 40-50 years, 56.16% were male. Thirty-seven percentages were found to have chronic renal failure. The most common causes are Diabetes (41%), Hypertension (22%), Chronic glomerular nephritis (16%), Chronic interstitial disease (5.4%), Ischemic nephropathy (5.4%), Obstructive uropathy (2.7%), miscellaneous (2.7%) and unknown cause (5.4%) **(Murugesan Ram Prabahar, 2010).** About 50 people a day die of kidney related disease.

The kidney can be affected by various disease conditions like high blood pressure, diabetes, hereditary diseases of the kidneys (Polycystic kidney disease), lower urinary tract infection (bladder infections), side effects of medication and use of herbo mineral preparations used in indigenous system of medicine. The kidney failure may be acute and chronic. Acute kidney failure happens suddenly within hours to days, can often be reversed if the underlying disease is treated. Mild and moderate kidney disease does not show any symptoms, whereas chronic kidney failure occurs gradually over a period of months to years. Due to chronic kidney failure the toxins accumulate in a person's blood and symptoms arises which includes, puffy eyes, hands and feet edema, high blood pressure, fatigue, shortness of breath, loss of appetite, nausea and vomiting, thirst, a bad taste in the mouth or bad breath, weight loss, generalized, and persistent itchy skin, muscle twitching or cramping and a yellowish-brown tint to the skin, urine that is cloudy or tea-coloured.

The regular measurements of kidney function and laboratory tests help to identify the kidney impairment. The management for the chronic kidney disease includes, smoking cessation, weight reduction, aerobic exercise, limiting alcohol intake, limiting sodium intake, avoidance of nephrotoxins like intravenous radio contrast agents, NSAIDs, amino glycosides etc. Cardiovascular prophylaxis includes

aspirin treatment (if blood pressure is below 150/90mm Hg), lipid-lowering drug therapy, blood pressure monitoring, and control of hypertension, initiation of antihypertensive medication, angiotensin-converting enzyme (ACE) inhibitor and angiotensin receptor blocker (ARB). Chronic Kidney Disease diagnosed as stage 4 and stage 5 is managed by renal replacement therapy.

Renal replacement therapy includes hemodialysis, peritoneal dialysis, chronic ambulatory peritoneal dialysis or renal transplantation. Among the renal replacement therapy, dialysis is a procedure that is a substitute for many of the normal duties of the kidneys. Two types of dialysis are used namely hemodialysis and peritoneal dialysis. In India 1,125,740 people have under gone dialysis (**Wrong diagnosis, 18 November 2010).**

In peritoneal dialysis, the peritoneal cavity acts as the dialysate reservoir and the peritoneum as the semi permeable membrane where the exchange of the waste materials occurs, through a catheter implanted into the abdominal cavity. About 2 to 3 liters of dialysis fluid are infused into the abdominal cavity through the access catheter. This fluid contains substances that pull wastes and excess water out of neighboring tissues. The fluid is allowed to dwell for two to several hours before being drained, taking the unwanted wastes and water with it. The fluid typically needs to be exchanged four to five times a day. Peritoneal dialysis offers more freedom compared to hemodialysis, patients do not need to come to a dialysis center for their treatment.

Hemodialysis is another type of renal replacement therapy. It is a mechanical means of removing nitrogenous waste from the blood by imitating the functions of nephrons. It involves filtration and diffusion of the waste, drugs and excess electrolyte by different methods like osmosis, diffusion or ultra filtration through a semipermiable membrane in to dialysate solution in which blood is passed through a machine that purifies and returns in to the body.

Patients with End- Stage Renal Failure have try to adapt a chronic physical illness and coping with dependence on a dialysis machine or kidney transplantation. For these types of patients and family needs cognitive, emotional and behavioral supports **(Sensky, 1993)**.

Most of the patients undergoing hemodialysis have complications like hypotension, increased weight gain, headaches, nausea or vomiting, fluid overload, muscle cramping, itching, dry skin, high phosphorus levels and allergic reactions. Patients to commit towards adherence with strict dietary and fluid restrictions, and to take medication on a regular basis is very important in hemodialysis **(B. J. Hailey, 2000).** Non adherence to the prescribed regimen which includes fluid restrictions, dietary and medication guidelines and regular hemodialysis session is a common problem in hemodialysis and is associated with increased morbidity and mortality **(Kris Denhaerynck, 2007).**

The noncompliance mostly observed in the aspects like regular in dialysis, medications, fluid restrictions, control over weight gain between two dialysis, diet restriction and exercise for patency of AV fistula. The reason for noncompliance which include age of the patient, psychosocial stressors like loss of income, marital problems (divorce), illness and death in the family, loss of primary caregiver, conflicting family care giving, transportation problems etc. **(Dr. Michael Vitiello, 2009)**.

Ignorance to the post dialysis instruction and improper practices are the causes of complications during and after the dialysis. The strategies to reduce the non compliance to post dialysis instructions includes personalizing the treatment plan, recounting a famous person who overcame obstacles, behavior modification technique, spiritual intervention, educational programmes, counseling etc. Standard individual ongoing counseling is equally effective as educational counseling compliance program in affecting serum phosphate levels among patients with end-stage renal disease who receive hemodialysis **(Naomi J Shaw-Stuart 2003).**

Counseling is an interaction to assist the client in improving or regaining their previous coping abilities, fostering mental health and preventing the mental illness and disability **(ANA-2000).**

NEED FOR THE STUDY

Hemodialysis is the common way to treat Chronic Kidney Failure. This treatment which help to carry on active function of failing kidneys. In hemodialysis, a machine filters wastes, salts and fluid from blood when the kidneys are no longer healthy enough to do its work. Hemodialysis helps to carryout kidney's functions like controlling blood pressure, maintaining the proper balance of fluid and various chemicals and maintains the proper acid-base balance. It begins well before kidneys have shut down to the point of causing life-threatening complications.

Usually the hemodialysis treatment done once in a week, twice in a week, thrice in a week or daily basis according to the condition of the client. The clients who are undergoing hemodialysis may experience tiredness, nausea, vomiting, increased thirst, hypotension etc, after the dialysis.

Improper practices after the hemodialysis which may also cause hypotension, increased weight gain, headaches, nausea or vomiting, fluid overload, muscle cramping, itching, dry skin, high phosphorus levels and allergic reactions.

Patients undergoing hemodialysis must follow a strict treatment schedule and take medications regularly. Essential life style modifications include fluid control, diet control, weight management and increased regular physical activity.

Non compliance to post hemodialysis instructions is an important challenge for the health care providers including Nurses. Many factors affect the patient compliance which includes staff influence, patient characteristics, disease characteristics, and the realities of dialysis treatment. The dialysis team can exert a powerful influence on compliance through education and encouragement. These types of patients need better guidance for the better health practice and follow up; this is the role of Dialysis Nurse. Plans to address noncompliance should be based on an individualized review of the patient's psychological, social, and medical situation (**Robovacollis-2007).**

Nursing interventions should aid clients in recognizing their dysfunctional behavior, help them to describe the behavior verbally, connect to the causes and consequences of their behavior, search for more functional behavior and transfer the improved behavior to other situation **(Peplau 1962).** The nurses practicing today

are bound with a wide variety of duties and responsibilities and the world looks out for more systematic, specialized, highly proficient skills and techniques.

The nurse in the dialysis unit will assess weight, general condition, medications, prescribed diet, complaints like headache, dizziness, blurred vision, nausea, vomiting, fever, chills, shortness of breath, dyspnea, chest pain, palpitations, pain, bleeding, insomnia, weakness, fatigue, or change in level of activity, and changes in appetite , blood pressure and pulse ,vascular access, routine laboratory test, monitoring of hemodialysis adequacy, in pre-dialysis, during treatment, and post-dialysis. The nurse also instruct patient regarding current treatment prescription, signs and symptoms of complications, anticoagulation, vascular access, laboratory tests, monitoring of hemodialysis adequacy, medications, diet and fluid prescription including sodium restriction and thirst management. Reinforce the client regarding the benefits of following the prescription for treatment, medication, exercise, and nutrition therapy. He also included that the outcome of dialysis will be free of treatment induced complications **(Burrows Hudson, et. Al. 2005**).

Continuous individualized counseling helps the patient to follow the post dialysis instructions effectively, in each dialysis session. So, it is the vital responsibility of the dialysis nurse to counsel the patient to follow up post dialysis instructions.

The professional staff including nurses should teach the clients regarding hemodialysis procedure, current treatment prescription, signs and symptoms of complications, anticoagulation, vascular access, laboratory tests, monitoring of hemodialysis adequacy, medications, diet and fluid prescription including sodium restriction and thirst management, and reporting of symptoms, illnesses, injuries, or hospitalizations since last treatment. Teach or reinforce the benefits of following the prescription for treatment, medication, exercise, and nutrition therapy.

Unfortunately, non compliance to the post dialysis instructions is the main burden for the health care professionals. The non compliance which causes dialysis induced complications. The outcome to dialysis treatment can be measured by free of treatment induced complications. Periodic counseling in the aspects like drug and follow up, fluid restrictions, diet restrictions and exercise for patency of AV fistula

helps to improve the compliance to the post dialysis instruction and improve the outcome of dialysis.

Also, during her clinical experience, the investigator found out that most of the complications in hemodialysis patients occurs due to noncompliance to post hemodialysis instructions. The clients are very much worried about their problems. The dialyses departments are mainly taken care by the nurses. The nursing staff needs to take steps to improve the compliance to post hemodialysis instructions and outcome of dialysis in the sense of absence of dialysis induced complications. So the investigator wanted to do something for the benefit of this population. The investigator felt a need to assess the effect of individualized counseling on compliance to post dialysis instructions and outcome of dialysis among patients undergoing regular hemodialysis.

STATEMENT OF THE PROBLEM:

A study to assess the effectiveness of Individualized Counseling on compliance to post dialysis instructions and outcome of Hemodialysis among patients undergoing regular Hemodialysis in a selected hospital at Kerala.

AIM OF THE STUDY:

The aim of the study is to assess whether individualized counseling improves the compliance to post dialysis instructions and minimizes complications during hemodialysis among the patients undergoing regular hemodialysis.

SPECIFIC OBJECTIVES:

- To assess and compare the level of compliance to post dialysis instruction in experimental and control group before and after individualized counseling.
- To assess and compare the degree of the outcome of hemodialysis between the experimental and control group before and after individualized counseling.
- To associate the level of compliance to post dialysis instructions among experimental group and control group with selected demographic variables before the intervention.

ASSUMPTIONS:

- Poor adherence to post dialysis instructions will cause complications following hemodialysis.
- Individualized counseling will improve the follow up of post dialysis instructions in the home.

RESEARCH HYPOTHESIS:

- H_1: There is a significant difference between the mean compliance score in experimental and control group after individualized counseling.
- H_2: There is a significant difference between the mean outcome score in experimental and control group after individualized counseling.

OPERATIONAL DEFINITIONS:

1. EFFECTIVENESS:

Effectiveness is the result or anticipated outcome. In this study effectiveness is the improvement seen in following the post hemodialysis instructions by the patients and minimum complications during hemodialysis.

2. INDIVIDUALIZED COUNSELLING

Counseling means the act of exchanging opinions, ideas, advising or giving guidance. In this study individualized counseling is the interaction between the patient and the researcher, researcher explaining and instructing the importance of strictly following the post dialysis instructions.

3. OUTCOME OF HEMODIALYSIS:

Outcome means result followed by an action. In this study outcome refers to the presence or absence of complications during hemodialysis.

4. POSTDIALYSIS INSTRUCTIONS:

Post hemodialysis instructions are the instructions given to the patients to be followed at home after the dialysis. The instructions are focused on drug advised, follow up, fluid restrictions, diet control, exercise to maintain the patency of AV fistula, and reduction of interdialytic weight gain.

5. COMPLIANCE:

Compliance is the act in accordance with another's command, request, rule, or wish. In this study compliance is the strict adherence to the post dialysis instructions at home.

6. HEMODIALYSIS:

Dialysis is a method of treatment carried out to remove waste products from body in end stage renal failure disease. The patient is connected to a machine. As the blood circulates through the machine the waste products move out of the blood through a semi permeable membrane into the dialysis solution.

DELIMITATIONS:

The study is delimited to,

- Patients undergoing regular hemodialysis in the same dialysis department.
- 60 samples.
- The age group between 25 to 70 years.

LIMITATION:

- The study is done using a small number of non probability samples. So generalization is not possible.

SCOPE OF THE STUDY

Individualized counseling will improve the compliance to post hemodialysis dialysis instructions and minimize complications during hemodialysis among the patients undergoing regular hemodialysis. The findings of the study will help the health care providers to plan and conduct adequate counseling regarding the post dialysis instructions, and to improve the outcome of dialysis and the patient's compliance to post dialysis instructions.

CONCEPTUAL FRAMEWORK

"A theory is a set of interrelated concepts, adapted for a scientific purpose, definitions and propositions that present a systematic view of phenomena by specifying relations among variables with the purpose of explaining and predicting the phenomena" **(Kerlinger, 1986).**

"Conceptual frame work refers to interrelated concepts or abstractions that are assembled together in some rational scheme by virtue of their relevance to a common theme" (**Polit and Hungler, 1997).**

For this study the Conceptual framework is the Health Belief Model. The Health Belief Model **(Glanz-2011)** is a psychological model that attempts to explain and predict health behaviors. This is done by focusing on the attitudes and believes of individuals. The HBM was first developed in the 1950s by social psychologists Hochbaum, Rosenstock and Kegels.

The HBM is based on the understanding that a person will take a health-related action, if that person:

1. Feels that a negative health condition can be avoided,
2. Has a positive expectation that by taking a recommended action,
3. Believes that he or she can successfully take a recommended health action.

The concept of health belief model include,

1. Perceived Susceptibility
2. Perceived Severity
3. Perceived Benefits
4. Perceived Barriers
5. Cues to action
6. Self-Efficacy

Perceived Susceptibility:

An individual's perception is the chance of getting her or him to a disease condition. In this study, the individual's perception is the non adherence to the post hemodialysis instruction will cause the chance of getting the complications.

Perceived Severity

An individual belief about the seriousness and the severity of the condition and its consequences. In this study the perceived seriousness is the beliefs of the individual regarding the complications during and after the dialysis.

Perceived Benefits

An individual's belief in the efficacy of the advised action to reduce risk or seriousness of impact. In this study the individual start to rethink regarding the benefit which is achieved by the client due to the strict following up of post hemodialysis instructions including follow a strict treatment schedule, taking medications regularly and essential life style modifications namely fluid control, diet control, weight management and regular physical activity.

Perceived Barriers

An individual's opinion to what will stop him or her from adapting the new behavior. In this study, the efforts that the patient faced due to the strict follow up of post dialysis instructions are highlighted.

Cues to Action

Those factors which will start changes in the behavior of a person. In this study the patient starts to follow up the post hemodialysis instructions, through the influence of Individualized counseling.

Self-Efficacy

Personal belief is one's own ability to take action to produce the desired outcome. In this study the motivation which is received by the client through the counseling will help the client to strictly follow the post hemodialysis instructions

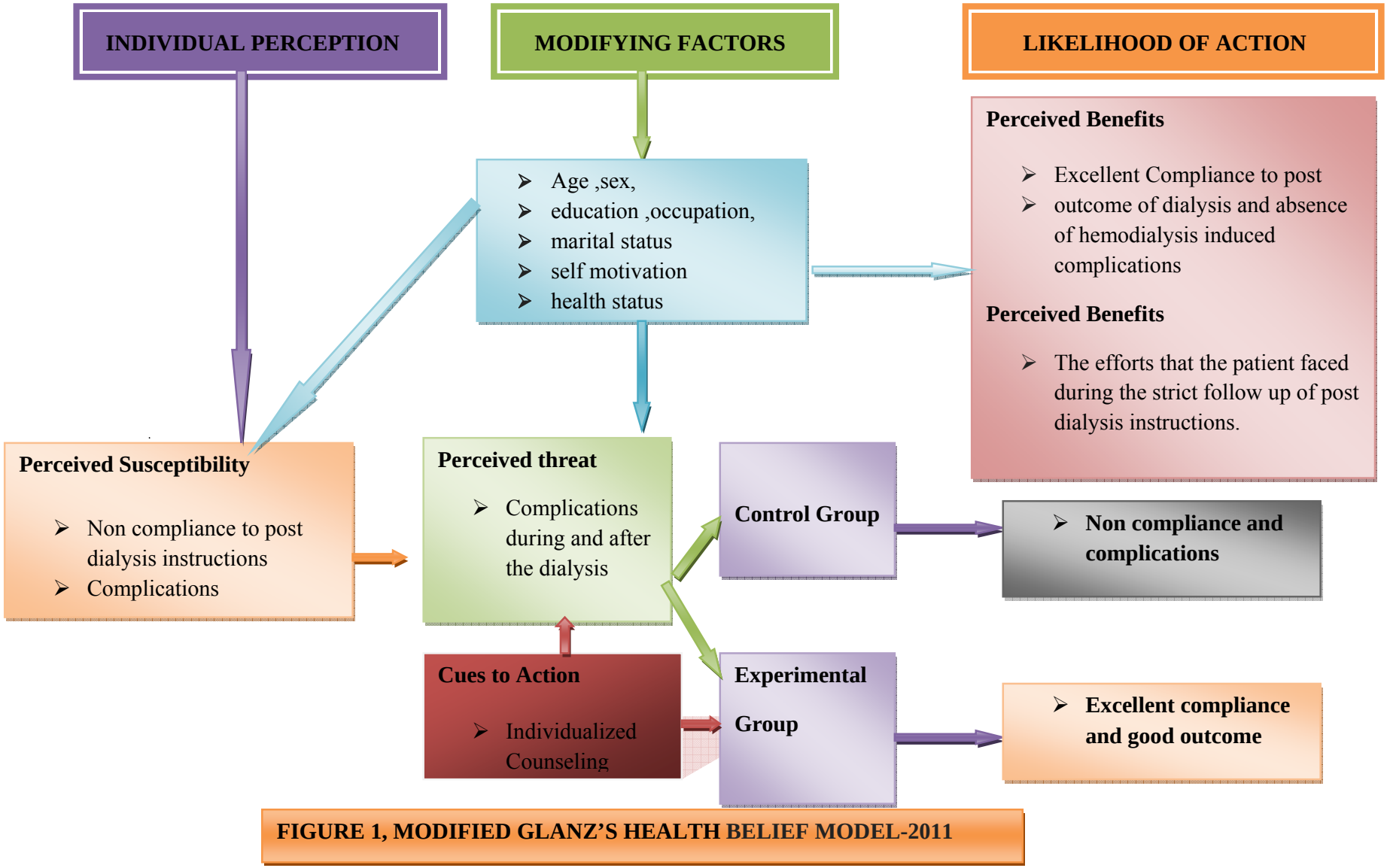

FIGURE 1, MODIFIED GLANZ'S HEALTH BELIEF MODEL-2011

REVIEW OF LITERATURE

CHAPTER II

REVIEW OF LITERATURE

"Reading the related topics of research problem will provide in depth knowledge to make the research proposal and to conduct the research" **(Polit and Hungler-1999).**

The literatures help the investigator to focus on past contributions supporting this study. The researcher has reviewed various theoretical and empirical literature related to the topic under study. The relevant and related literature that was found useful has been presented as follows,

I. Literature on the outcome of dialysis and complications.
II. Literature on compliance of patient to hemodialysis.
III. Literature on counseling in hemodialysis.

I. LITERATURE ON THE OUTCOME OF DIALYSIS AND COMPLICATIONS

Bernard Canaud.et.al (2007) conducted a study on the clinical practices and outcomes in elderly hemodialysis patients. The aim of the study was to provide an unique opportunity to assess dialysis practices and associated outcomes in various countries, during the period from 2005 to 2007. The results showed that, co morbidities and malnutrition were more common in the elderly hemodialysis patients. Fistulae were used less frequently among elderly *versus* younger patients in Europe and North America but not in Australia, New Zealand, and Japan. No difference in treatment time was observed between elderly and younger patients after normalizing for body weight. Elderly patients reported poorer quality of life with respect to the physical but not mental component scores.

Robert N Foley (2002) conducted a study on blood pressure and long-term mortality in United States hemodialysis patients. For this study 11,142 subjects receiving hemodialysis were drawn randomly from 1993 to 2000. The results showed that pre and post dialysis blood pressure values, interdialytic weight gain and number of antihypertensive averaged 151.8/79.7, 137.0/74, 3.6% and 0.76, respectively. The

study concluded that pre and post dialysis blood pressure values have independent associations with mortality, in a way that implicates wide pulse pressures.

Krassimir S. Katzarski,et.al.(2003) conducted the study on volume changes and blood pressure levels in hemodialysis patients. They conducted this study in selected hemodialysis centers in USA, with sample size of 16 (group 1, n=8, group 2, n=8) by convenient sampling. The results showed that group 1 demonstrated a significant fall in systolic (156 ± 16 vs 140 ± 14 mmHg) and diastolic BP (97 ± 12 vs 87 ± 9 mmHg) as well as in mean arterial pressure (117 ± 13 vs 105 ± 10 mmHg). This was more pronounced during the night than during the day (systolic BP 156 ± 15 vs 14 mmHg, diastolic BP 97 ± 12 vs 85 ± 9 mmHg).

P. Benna (2001) conducted a study on acute neurologic complications of Hemodialysis. The study was conducted on 14,000 hemodialysis in 103 patients with chronic renal failure at Torino. The aim of the study was to analyse the transient acute neurological complications arising in the course of hemodialysis in 103 patients with chronic renal failure. Among them some of the symptoms are a specific like headache, nausea and/or vomiting and muscle cramps. 96% of patients showed extra neurological symptoms and phenomena, such as cardio circulatory shock and decreased blood pressure. 36% of the patient complained convulsions, unconsciousness, psychomotor agitation and 10.5% showed dialysis disequilibrium syndrome.

Dr. Rachel M. Holden (2007) conducted a retrospective study on Major Bleeding in Hemodialysis Patients. The objective of the study was to examine risk factors for haemorrhage in hemodialysis patients. 1028 patients were participated in the study in a time period of 3.6 years. Among them 2.5% showed major bleeding episodes per person per year. The study concluded that the risk for major bleeding episodes in hemodialysis patients increases significantly on aspirin and/or warfarin.

An article by **Jonathan Himmelfarb,MD(2001)** regarding hemodialysis complications, reported that the hemodialysis complications are anemia, cardiovascular diseases, protein energy malnutrition, infections like HIV, HBSAG, calcific uremic atrophy etc. Intradialytic complications includes, hypotension, muscle cramps, dialysis disequilibrium syndrome which includes nausea, vomiting, headaches, fatigue, seizures, coma, arrhythmia, angina, and dialyzer reactions.

II. LITERATURE ON COMPLIANCE OF PATIENT TO HEMODIALYSIS.

Anthony J. Bleyer, (2005) conducted a study on patient compliance with hemodialysis, to compare international differences in patient compliance with hemodialysis treatments. It was a cross-sectional survey of health care professionals caring for hemodialysis patients in 1996 at four dialysis centers in the southeastern United States with 415 patients undergoing hemodialysis.1 center in Sweden with 84 patients, and 4 centers in Japan with 194 patients participated in the prospective observational study. Among the 415 US patients, 147 missed 699 treatments over a 6-month period. 28.1 samples missed treatments per 100 patient-months or 2.3% of all prescribed treatments. During a 3-month period, there were 0 missed treatments per 100 patient-months for patients from Japan and 0 missed treatments per 100 patient-months for patients from Sweden (*P*, 001). In the cross- sectional survey, the mean (SD) estimated percentage of patients missing a treatment per month was 4% (3%) for the United States, 0% for Japan, and 0.1% for Sweden (*P*, 001). The result shows that noncompliance is much more common in US patients undergoing hemodialysis than Swedish and Japanese patients.

Nancy G. Kuntner et,al (2002) conducted a study on psychological predictors of non-compliance in hemodialysis and peritoneal dialysis patients. The study was conducted in Albert Einstein College of Medicine in USA. A multicenter cohort of 119 hemodialysis patients and 51 peritoneal dialysis patients were studied. The objective of the study was to assess regarding patients health status, perceived self-health care depression, perceived control over further health, social support and disease specific perceived quality of life. Association of predictor variables with non-compliance indicators were examined in univariate and multivariable analysis. Among 119 hemodialysis patients 19% skipped at least one dialysis session and 31% had shortened at least one hemodialysis session.

Erwin Heking.et.al. (2002) conducted a study on haemodialysis prescription, adherence and nutritional indicators in five European countries, results from the dialysis outcomes and practice patterns. It was an observational study designed to evaluate practice patterns in random samples of haemodialysis facilities and patients across three continents. Participating countries included France, Germany, Italy, Spain, UK, Japan and the USA. The samples were selected randomly from 20–21

representative facilities. The results showed that a nearly 2-fold difference was observed in indicators of patient adherence and management (skipping and shortening dialysis, hyperkalaemia, hyperphosphataemia and high interdialytic weight gain). Indicators of malnutrition varied substantially.

Evelyn H.Yangida.et.al(2000) conducted a study on denial in dialysis patients- relationship to compliance and other variables. The purpose of the study was, to examine the physiological and psychological correlates of denial in a dialysis population and, to examine the relationship between use of denial and compliance to fluid restrictions. The subjects for this study were 46 chronic hemodialysis outpatients from the self-care and limited-care facilities of a hospital-based dialysis program in New York. The results showed that female patients and patients in the older age group were significantly more depressive.

Shuk-hang Lee.et.al.(2001) conducted a study on dietary and fluid compliance in Chinese hemodialysis patients. It was a cross-sectional study with 62 hemodialysis patients. The objective of the study was to examine dietary and fluid compliance behaviours in Chinese hemodialysis patients and identified variables related to compliance. The study found out that dietary and fluid compliance was observed in only 35.5% and 40.3% of the patients, no direct relationship was observed between dietary knowledge and any compliance measures. Patients with more hours on hemodialysis per week were found to be more fluid noncompliant. Patient education with family involvement, identification of at-risk patients for noncompliance and assisting patients to identify and manage difficulties with life-style changes related to HD are important elements in promoting compliance.

Sherie Sourial(2005) conducted a study on barrier to nutritional supplement use in dialysis patients in Auckland district health board, This study was to find out the level of compliance to nutritional supplement use and the barriers to supplement use at Auckland District Health Board. This was undertaken through the development of a questionnaire. 31 samples were drawn by convenient sampling. The results showed that 12 out of 31 patients were high in compliant, 10 out of 31 patients showed moderate compliance and 7 out of 31 showed low compliance. Compliance appears to be improved with lower prescribed volumes, with 7 out of 31 high compliance individuals having 1 supplement recommended per day. Reduced appetite

was most significant barrier (25 out of 31), nausea and dislike was the primary barrier for 4 out of 31 patients. Boredom, inconvenience and others were the primary barriers for 2 out of 31 patients.

Shuk-King Pang RN RMN BN MNUR.et.al (2001) conducted a study on psychosocial correlates of fluid compliance among Chinese hemodialysis patients. The aim of the study was to assess and determine the psychosocial correlates of fluid compliance among patients receiving hemodialysis at two Hong Kong renal dialysis centers. 92 samples were drawn by convenient sampling in different hemodialysis centers in China. The results showed that prevalence of compliance behavior of Chinese hemodialysis patients was higher than that reported in western studies. Significant predictors of inter dialytic weight gain included satisfaction with social support.

Park, K.A. (2005) conducted a study on comparison of dietary compliance and dietary knowledge between older and younger Korean hemodialysis patients. The objective of the study was to compare the compliance and the knowledge of dietary restriction regimens between older and younger hemodialysis patients.160 patients were selected by convenient sampling in Asian Medical Center (Seoul, Korea). Data were collected between September 2003 and February 2004. The older hemodialysis patients had a lower appetite, lower physical activity, and lower educational level compared to the younger hemodialysis patients. Dietary compliance with phosphorus restriction and with sodium and fluid restriction was higher in the older hemodialysis patients than in the younger hemodialysis patients. ($P<.01$ and $P< .05$, respectively), whereas compliance with potassium restriction did not differ between these groups.

Ze'ev Katzir,et.al. (2002) conducted a study on Medication Apprehension and Compliance among Dialysis Patients, a Comprehensive Guidance Attitude. It was a pre- versus post-intervention study with a sample size of 89 chronic dialysis patients. The data were collected by using a written questionnaire. The researchers assess compliance of prescribed medications like metabolic drugs, antihypertensive, cardiac-supporting agents, peptic disease therapy and hematological replacement therapy. The result showed that overall compliance with prescribed medications significantly improved following the intervention, from 89 to 95.7%, $p = 0.0007$. Improvement in compliance was associated with lower initial scores, fewer years of

education, and longer dialysis vintage. Compared to baseline values, post-intervention blood hemoglobin, hematocrit, mean corpuscular volume, ferritin and calcium levels were significantly improved.

Mahmoud Loghman-Adham, MD (2011), reported that noncompliance with medications and other aspects of treatment was a challenging one in treatment of patients with dialysis treatment or after kidney transplantation. Various factors may influence medication compliance, including health beliefs, motivation, dosage frequency, side effects, drug-level monitoring, age, sex, education level socioeconomic situation, medication taking cues and forgetfulness.

An article by **Robovacollis (2007)** regarding partnering in dialysis care, compliance and self management. A large number of people on dialysis are not following recommended treatments completely. Many factors that affect compliance which includes staff influence, including patient characteristics, disease characteristics, and the realities of dialysis treatment. The dialysis team can exert a powerful influence on compliance through education and encouragement. Plans to address noncompliance should be based on an individualized review of the patient's psychological, social, and medical situation.

Ignatavicius and Workmann (2006) wrote regarding the essential care given by a client regarding the care of AV fistula. It includes assessment, exercises, complication, and how to take care the fistula. An article published about "AV fistula and AV graft care" The Ohio State University Medical Center, reported the care to the AV fistula and AV graft including post-operative care and protecting the fistula/graft blood flow after treatment.

II. LITERATURE ON COUNSELING IN HEMODIALYSIS

M Dhawan, et al.(2008) conducted a study on the impact of 3 months of dietary counseling on nutritional status of dialysis patients. The aim of the study was to evaluate the impact of 3 months of general dietary counseling on various nutritional parameters. 38 patients were studied at baseline and after 3 months of dietary counseling. Patients were counselled regarding intake of recommended protein and calories, and restriction of salt, fluids, potassium, free sugars and saturated fats. Nutritional parameters were assessed by anthropometry. The results showed that

dietary counseling of 3 months had positive impact with significant decreased intake of potassium and phosphorus and increase in hemoglobin level.

Adamasco Cupisti.et.al(2004) conducted a study on dietary habits and counselling focused on phosphate intake in hemodialysis patients with hyperphosphatemia. The study was conducted in hospital hemodialysis units of Pisa and Pistoia, Italy. Subjects were forty three stable adult hemodialysis patients, 20 of them had phosphorus serum levels >5.5 mg/dL. The objective of the study was to evaluate the dietary habits of hemodialysis patients with hyperphosphatemia and the effects of a dietetic intervention focused on limiting dietary phosphate load. The results showed that no major differences in nutrient intake were detected between hyperphosphatemia and normophosphatemia patients, a lower phosphorus-protein ratio (13.1 1.7 versus 14.1 2.1 mg/g, $P < .05$). After dietetic intervention in the hyperphosphatemia patients, dietary protein did not change, phosphate and calcium intake decreased significantly (by 100 mg on average). Serum phosphate also decreased in the intervention group, whereas the serum calcium-phosphate product decreased significantly (from 66.8 13.1 to 61.0 13.8 mg2 /dL2 , $P < .05$)

Revenda Ann Greene(2003) conducted a study on African- American perception on pre and post dialysis education and treatment. Methodology adopted for the study was an evaluatory one, 100 study participants were drawn from a convenience sample of hemodialysis patients in the Washington. The purpose and primary goals of the study were to identify the self reported level of satisfaction among ESRD patients regarding pre-dialysis information and health care, to determine differences existing in the type and degree of pre-dialysis education and treatment. The results showed that among them one fourth of respondents (26%) indicated less freedom because they had to schedule their lives around dialysis treatment, 24% reported the dialysis process was limiting and difficult, 16% reported they were unable to perform leisure activities or travel like they wanted. 20% reported dialysis was inconvenient, 8% reported being depressed by having to be on dialysis, 8% reported dialysis had caused them to lose their job.

Naomi J Shaw-Stuart, et.al (2003) conducted a time series study on the effect of an educational patient compliance program on serum phosphate levels in patients receiving hemodialysis. The objective of this study was to determine the

effectiveness of a recently developed educational patient compliance program on improving serum phosphate levels in patients receiving hemodialysis. Eighty-one patients receiving hemodialysis participated in this study. No statistically significant differences were found in serum phosphate levels between the two groups ($P > .05$). The findings suggested that an educational compliance program is equally effective as standard individual ongoing counselling in affecting serum phosphate levels among patients with end-stage renal disease who receive hemodialysis.

Sara F. Morris, MAT, MPH, R.D.et.al (2010) described medical nutrition therapy a key to diabetes management and prevention. The individuals who have pre-diabetes or diabetes should receive individualized medical nutrition therapy (MNT-nutritional diagnostic, therapy, and counseling services for the purpose of disease management) as needed to achieve treatment goals also emphasized the importance of MNT in preventing diabetes, managing existing diabetes, and preventing and slowing the onset of diabetes-related complications.

CONCLUSION

The review of literature enlightened the investigator to develop an insight into the counseling and its effectiveness. This review helped the investigator to gain a deeper knowledge of the research problem and guided in designing the study.

METHODOLOGY

CHAPTER- III

RESEARCH METHODOLOGY

Methodology of research organizes all the components of the study in a way that is most likely to lead to valid answer to the problems that have been posed **(Burns and Grove 2002).**

This chapter deals with the methodology to assess the effectiveness of individualized counseling on compliance to post dialysis instructions and Outcome of hemodialysis among patients undergoing regular hemodialysis. It includes research design, setting, population, sample, and sampling technique, sampling criteria, description and construction of tool, pilot study , data collection procedure and data analysis.

RESEARCH APPROACH

The research approach is an overall plan chosen to carry out the study. The selection of research approach is the basic procedure for the conduction of research inquiry. An evaluative approach was used in this study as the study aimed to assess the effect of individualized counseling on compliance to post dialysis instruction and outcome of hemodialysis among patients undergoing regular hemodialysis.

RESEARCH DESIGN

Quasi experimental pre and post control group design was considered for this study.

Experimental group O_1 X ----------O_2 X----------O_3

Control group O_1 ----------O_2----------O_3

X : Individualized counseling (intervention).

O_1 : Observation before counseling for experimental and control group.

O_2 : Observation one week after the first counseling for experimental group and without counseling for control group.

O_3 : Observation one week after the second counseling for experimental group and without counseling for control group.

An individualized counseling was given for the experimental group after the pre-test. Post test was conducted on 7^{th} and again on 14^{th} after intervention in experimental group. In control group baseline data was collected and subsequent observations was conducted on 7^{th} day and 14^{th} day without counseling.

VARIABLES IN THE STUDY

In this study, independent variable was individualized counseling and dependent variables were outcome of hemodialysis and compliance to post dialysis instructions.

SETTINGS OF THE STUDY

The study was conducted in the dialysis department of a selected hospital at Perinthalmanna, Kerala.

This was an ISO 9001 : 2008 certified Multispecialty Referral Hospital having 500 beds catering to 3 million population. This hospital provides basic care and also advanced trauma care. It have all the wings of Medical and Surgical specialties, IVF and ICSI lab, Hip and Knee Replacement surgery Cardiothoracic surgery, Dialysis & Renal Transplant Surgery, Metabolic & Bariatric Surgery with all modern and advanced equipments like spiral CT Scan, Cath Lab, Colour Doppler etc.

The hemodialysis department is a well equipped 24 hours outpatient based with 7 dialysis machines and 82 patients were undergoing regular dialysis. 20-25 dialyses are conducted daily. The staffing pattern includes one nephrologist, one registered medical officer, one dialysis technician, 15 staff nurses, one attender and one class four worker. The staff patient ratio in this dialysis department is 1: 2. The dialysis staff provides post dialysis instructions to the patients on date of follow up and fluid restriction after the dialysis.

POPULATION

The population included all the clients who underwent regular hemodialysis and meeting the sampling criteria during the period of the study.

SAMPLE SIZE

The sample consisted of 60 patients undergoing hemodialysis (control group-30, experimental group-30) who were selected from the population based on the sampling criteria.

SAMPLING TECHNIQUE

Non probability purposive sampling method was used. The samples meeting the inclusion criteria were included for the study. The first patient was assigned to experimental group and every alternate patient was assigned to control group.

SAMPLING CRITERIA

Inclusion criteria:

- Patients undergoing regular hemodialysis in the same department.
- Patients who were willing to participate.
- Patients who had minimum one dialysis in a week.
- Conscious patients who were able to follow instructions.
- Patients with good vision and hearing perception.
- Approach of dialysis through the A V fistula.

Exclusion criteria:

- Trained health personnel.
- Critically ill patients.
- Drop outs.

DEVELOPMENT OF THE TOOL

The tool was developed based on the objectives of the study, review of literature and discussion with experts. The investigator's own experience of working in the dialysis departments contributed to developing the tool.

DESCRIPTION OF THE TOOL

The tools used for the collection of the data were a structured interview schedule, a rating scale and an observational check list.

A. Structured interview schedule (Reference appendix –VI, Page No: 93)

This section was designed to collect demographic informations such as age, sex, educational status, occupation, marital status, presence of any other systemic disease, duration of dialysis, number of dialysis per week, types of drug currently taken, weight gain in between two dialysis.

B. Rating scale to assess compliance to post dialysis instruction.

The rating scale for the compliance to post dialysis instructions was based on four aspects, which included six questions on drug advised and date of follow up visit, three questions on fluid restriction, five questions on diet restriction and two questions on exercise for patency of fistula. A four point scale was used. The responds are marked as always -1 (follow as prescribed), often -2 (follow but not full time), sometime -3 (follow some time) and not at all -4 (do not follow as prescribed). This rating scale was designed to mark pre and post intervention on 7^{th} day and 14^{th} day.

C. Check list to assess the outcome of dialysis

An observational check list was made for assessing the presence or absence of complications during dialysis. It consisted of 16 problems which could occur during and after the dialysis (like hypotension, bleeding, hypersensitivity reaction, restlessness, pruritus/itching/dry skin, confusion, disorientation, seizure, shortness of breath, nausea, vomiting, blurred vision, faintness or dizziness, lack of appetite, numbness in the hands or feet and muscle cramps) and one question regarding the view of the sample to the current dialysis. The check list was designed to mark the presence or absence of the problems before and after intervention on 7^{th} and 14^{th} day.

SCORING AND INTERPRETATION OF SCORING

1. **Rating scale to assess compliance to post dialysis instruction.**

The interview schedule contains different types of questions. In the compliance to post dialysis instruction the minimum score was 0 and maximum score was 64.

Score for each level

Always	4
Often	3
Sometimes	2
Not at all	1

Aspects	**Minimum score**	**Maximum score**
1. Drug and follow up	1	24
2. Fluid restriction.	1	12
3. Diet restriction.	1	20
4. Exercise for patency of fistula	1	08
5. Overall scoring	4	64

Aspects	**Score**	**Grading**
a. Drug and follow up	20 -24	Excellent
	13 -19	Good
	07-12	Average
	01-06	Poor
b. Fluid restriction.	10 - 12	Excellent
	07-09	Good
	04-06	Average
	01- 03	Poor
c. Diet restriction.	15-20	Excellent
	10-14	Good
	05-09	Average
	01- 04	Poor

d.	Exercise for patency of fistula	07- 08	Excellent
		05 -06	Good
		03-04	Average
		01- 02	Poor
	Overall scoring	51-64	Excellent Compliance
		34-50	Good Compliance
		17-33	Average Compliance
		04- 16	Poor Compliance

a. Checklist on outcome of dialysis.

A score of one was assigned for the absence of complication during dialysis and zero score was assigned for the presence of complication during the dialysis. In the outcome of dialysis minimum score was 0 and maximum score was 19.

Score interpretations are,

a. Excellent : 15- 19
b. Good : 10-14
c. Average : 05-09
d. Poor : 00-04

The view of the client to the current dialysis was scored as three for comfortable dialysis, two for somewhat comfortable and one for not at all comfortable.

VALIDITY OF THE RESEARCH TOOL

The research tools including the objective of the study along with the criteria check list were submitted to four experts – two nurse educators and two physicians. The three nursing experts were Professors with Masters Degree in Nursing and working in different Colleges of Nursing in Coimbatore with more than 5 years of experience.

The physician was a Retd. Professor in Preventive Medicine with more than 25 yrs of experience and was working in a private hospital at Coimbatore.

RELIABILITY OF THE RESEARCH TOOL

The reliability of the rating scale was tested by split half method. The test was administered to 8 patients. Reliability was calculated by Spearman's coefficient of correlation (the obtained overall r value was 0.842). Reliability also was checked in different aspects, which included drug advised and date of follow up (r value = 0.834), fluid restriction (r value = 0.832), diet restriction (r value = 0.826) and exercise for patency of fistula (r value = 0.903).

In order to check the reliability of the observational checklist for outcome of dialysis inter rater method was used. Eight samples were assessed by two persons at the same time and marking independently on the checklist. Eight samples were observed. The reliability was calculated by Guttmann correlation. The obtained r value was 0.903.

PILOT STUDY REPORT

A pilot study was conducted in the same selected hospital to test the feasibility of the study. Permission was obtained from the concerned authority of the hospital. Ten samples were taken from the dialysis department of the hospital. Patients were randomly assigned to control and experimental group. A pretest was given to both experimental and control group. In the Experimental group 5 members were provided with individualized counseling regarding the post dialysis instruction in different aspects such as drugs advised and date of follow up, fluid restriction, diet restriction and exercise for patency of fistula. Post-tests were administered to experimental group 7^{th} and 14^{th} day after the intervention and subsequent observations were conducted in control group on 7^{th} and 14^{th} day without intervention. The total period of data collection was 14 days. The pilot study confirmed the adequacy of the tool and technique. Hence no modification was required to the tool.

DATA COLLECTION PROCEDURE

The data was collected from 25 August 2011 to 25 September 2011. Before commencement of data collection once again the hospital authority was informed and

permission was obtained. The nursing superintendent of the hospital was contacted and briefed about the study. Non probability purposive sampling method was used. The samples meeting the inclusion criteria were included for the study. The first patient was assigned to experimental and every alternate patient was assigned to control group. The patients were approached individually and the counseling was conducted.

1ST STEP

The researcher introduced herself and about the study of the samples and explained the purpose of the study and collected baseline informations (demographic data). They were also informed about their role in this study. Pretest was conducted by using interview schedule before dialysis; at the same time blood pressure and weight of the sample were also checked.

2nd STEP

During the time of the dialysis, the investigator observed the samples frequently to identify any complications. Blood pressure was monitored every half an hour to rule out hypotension.

3rd STEP

After the dialysis treatment, post hemodialysis instructions were identified from the medical records. Then the counseling session was conducted in a separate area near to dialysis department, based on a well structured counseling plan regarding the aspects of post hemodialysis instruction like, drug advised and date of follow up, fluid restriction, diet restriction and exercise for patency of fistula. Relatives or care givers are also allowed to the counseling session. The clients were encouraged to strictly follow the post hemodialysis instruction. The average time four each counseling was 20 to 30 minutes, and total data collection takes two weeks for each patient. The counseling also conducted on 7th day after collection of informations from the samples. The clients in the control group were also taught and allowed to clarify their doubts after the data collection was over, for their benefits.

PLAN FOR DATA ANALYSIS

The data obtained were analyzed using descriptive and inferential statistics.

Descriptive statistics

Frequency and percentage distributions were used to analyze demographic variables and the compliance to post dialysis instruction and outcome of dialysis. Mean and mean score percentages were used to determine the difference in the level of compliance to post hemodialysis instructions and degree of outcome of dialysis.

Inferential statistics

Paired and unpaired 't' test was used to determine the significant difference in the compliance to post dialysis instructions and outcome of dialysis in experimental and control group.

'Chi square' test was used to assess the association of demographic variables with the compliance of post dialysis instruction and outcome of dialysis.

ETHICAL CONSIDERATION

A prior permission was obtained from the management, head of the department, nursing superintendent, staff in dialysis department, patient and family members. Nature, purpose and type of the study and intervention were explained and obtained a written consent from the client. Privacy and comfort of the samples were maintained throughout the study. Adequate explanation was given whenever they asked questions, and records were maintained for each client. The clients in the control group were also provided individualized counseling and allowed to clarify their doubts after the data collection was over for their benefits.

ANALYSIS AND INTERPRETATION

CHAPTER IV

ANALYSIS AND INTERPRETATION

Dennis F Polit (2008) has described analysis as an inductive process that involves determining the pervasiveness of key ideas. The process includes converting large masses of data into smaller, more manageable segments, putting these segments together into meaningful conceptual pattern.

This chapter deals with the analysis and interpretation of the data gathered from 60 patients undergoing regular hemodialysis.

Section – 1. Demographic characteristics of the sample

This section deals with the demographic profile of the samples in relation to their age, sex, education, occupation, marital status, presence of any systemic diseases, duration of dialysis treatment, number of dialysis per week, type of drug currently taken, and weight gain of the client between two dialysis.

Section – 2. Comparison of level of compliance to post hemodialysis instructions of the experimental and control group

Compliance of the sample to the post dialysis instructions (drug and follow up, fluid restriction, diet restriction and exercise for the patency of AV fistula.) in the experimental and control group has been analyzed and compared in frequency, percentage, mean score, mean score percentage and significant difference by statistical testes before intervention and after intervention on 7^{th} and 14 days.

Section – 3. Comparison of degree of outcome of hemodialysis in experimental and control group

Outcome (presence or absence of complications) of hemodialysis among the experimental and control group has been analyzed and compared in frequency, percentage, mean score, mean score percentage and significant difference by statistical tests before intervention and after intervention on 7^{th} and 14 days.

Section – 4 Association of selected demographic variables with level of compliance to post dialysis instructions before the intervention.

This section presents association of demographic variables with the level of compliance to post dialysis instructions before the intervention.

Section – 1. Demographic characteristics of the samples

TABLE – I

FREQUENCY AND PERCENTAGE DISTRIBUTION OF SAMPLES

ACCORDING TO PERSONAL CHARACTERISTICS

N=60

SI: NO	DEMOGRAPHIC CHARACTERISTICS	EXPERIMENTAL GROUP (N=30)		CONTROL GROUP (N=30)	
		F	%	F	%
1.	**Age**				
	➢ 25-35 years	11	36.70	3	10.00
	➢ 36-45 years	5	16.70	5	16.70
	➢ 46-55years	5	16.70	12	40.00
	➢ 56-65 years	6	20.00	6	20.00
	➢ More than 65	3	10.00	4	13.30
2.	**Sex**				
	➢ Male	20	66.70	17	56.70
	➢ Female	10	33.30	13	43.30
3.	**Educational status**				
	➢ No schooling	3	10.00	2	06.70
	➢ Primary school	8	26.70	11	36.70
	➢ High school	6	20.00	9	30.00
	➢ Higher secondary	4	13.30	4	13.30
	➢ Graduate	9	30.00	4	13.30
4.	**Occupation**				
	➢ Farmer	3	10.00	5	16.00
	➢ Laborer	3	10.00	1	03.30
	➢ Private employee	13	43.30	10	33.30
	➢ Government	4	13.30	4	13.30
	➢ Unemployed	7	23.30	10	33.30
5.	**Marital status**				
	➢ Single	4	13.30	27	90.00
	➢ Married	23	76.70	1	03.30
	➢ Widower	1	03.30	2	06.70
	➢ Separated	2	06.60	-	-

Table I: shows the frequency and percentage distribution of the experimental and control group samples according to personal characteristics.

Age:

In experimental group 11(36.70%) were in the age group of 25-35 years whereas in control group 12(40%) were 46-55 years of old. In experimental group 3-5 samples were in the age group of 36- 45 years, 46-55 years, 56-65 years and more than 60 years. In control group 3-6 samples were in the age group of 25-35 years, 36-45 years, 56-65 years and more than 65 years.

Sex:

In experimental and control group 17-20 (56.70-66.70 %) were males and the remaining were females.

Education:

In experimental group 6-8 (20 -26.70 %) had secondary education. In control group 9-11 (30-36.70 %) had primary and high school education, whereas remaining were distributed in no schooling, primary schooling and higher secondary schooling. In experimental group 9 (30 %) were graduate whereas in control group 4 (13.30%) were graduates.

Occupation:

In experimental group 13 (43.30 %) were private employees, 3-7 (10-23.30 %) were either farmers, laborer, government employees or unemployed. In control group 10 (33.30 %) were private employees and unemployed and the remaining were farmers, laborers, and government employed.

Marital status:

In experimental group 23 (76.70 %) were married, 1- 4 (06.60-13.30 %) were single, widower and separated, whereas in control group 27 (90%) were single and the remaining were widower and married.

TABLE – II

FREQUENCY AND PERCENTAGE DISTRIBUTION OF SAMPLES

ACCORDING TO DISEASE CONDITION AND DIALYSIS INFORMATION

N = 60

SI: NO	DEMOGRAPHIC CHARACTERISTICS	EXPERIMENTAL GROUP (N=30)		CONTROL GROUP (N=30)	
		F	%	F	%
1.	**Duration of dialysis.**				
	➢ 1-6 months	02	06.70	-	-
	➢ 6 months – 1 year	09	30.00	08	26.70
	➢ 1-2 years	13	43.30	18	60.00
	➢ More than 2 years	06	20.00	04	13.30
2.	**Number of dialysis per week**				
	➢ Daily	03	10.00	01	03.30
	➢ Thrice in a week	17	56.70	16	53.30
	➢ Twice in a week	06	20.00	09	30.00
	➢ Once in a week	04	13.30	04	13.30
3.	**Weight gain of the sample between dialysis**	07	23.3	02	06.70
	➢ 0-0.5 Kg	16	53.3	06	20.00
	➢ 0.6 -1 Kg	06	20.00	10	33.30
	➢ 1.1-1.5Kg	01	03.30	12	40.00
	➢ 1.6-2 Kg				
4.	**Presence of systemic diseases**				
	➢ Hypertension	13	43.30	09	30.00
	➢ Diabetes Mellitus	01	03.30	02	06.60
	➢ Both	12	40.00	18	60.00
	➢ None	04	13.30	01	03.30
5.	**Type of drug currently taken**				
	➢ Hypertensive	10	33.30	10	33.30
	drug	-	-	02	06.70
	➢ Diabetic Drug	12	40.00	14	46.70
	➢ Both	08	26.70	04	13.30
	➢ None				

Table II shows the frequency and percentage distribution of the experimental and control group samples according to disease condition and dialysis information.

Duration of dialysis:

In experimental group 9-13 samples (30-43.30 %) and in control group 8-18 (26.70-60 %) were undergoing dialysis 6 months-2 years whereas the remaining were distributed in the duration of 1-6 months, more than 2 years.

Number of dialysis per week:

In experimental group 17 samples (56.70 %) and in control group 16 (53.30 %) had dialysis thrice in a week, only 3 (10 %) in experimental and 1 (3.30 %) in control group had daily dialysis, whereas 4-9 (13.30-30%) had dialysis once in a week or twice in a week dialysis.

Weight gain of the sample between dialysis:

More than half 16 (53.30%) of experimental group had increase weight gain of 0.6-1 Kg, whereas nearly half 12 (40 %) of control group had weight gain of 1.6-2 Kg and remaining had a weight gain of 0-0.5 Kg and 1.6-2 Kg.

Presence of systemic diseases:

Twelve (40%) in experimental group and 18 (60 %) in control group had both Hypertension and Diabetes, 13 (43.30 %) in experimental and 9 (30 %) in control group had Hypertension and 1 (03.30%) in experimental and 2 (06.60%) in control group had Diabetes Mellitus.

Type of drug currently taken:

Nearly half (12-14) (40-46.70%) of the experimental and control group were taking both antihypertensive and diabetic drugs, whereas 10 (33.30%) in each group were taking only antihypertensive drugs and remaining were not using any drugs.

Section – 2. Comparison of level of compliance to the post hemodialysis instructions of the experimental and control group.

TABLE – III

FREQUENCY AND PERCENTAGE DISTRIBUTION OF EXPERIMENTAL AND CONTROL GROUP SAMPLES ACCORDING TO LEVEL OF OVERALL COMPLIANCE TO POST HEMODIALYSIS INSTRUCTIONS BEFORE AND AFTER INTERVENTION

N=60

Group	Time of Observation	Level of compliance							
		Excellent		Good		Average		Poor	
		F	%	F	%	F	%	F	%
Experimental Group (N=30)	Before Intervention	-	-	-	-	27	90	03	10
	7th day After Intervention	-	-	19	63.3	11	36.7	-	-
	14th day After Intervention	14	46.7	16	53.3	-	-	-	-
Control Group (N=30)	Baseline Observation	-	-	01	3.3	29	96.7	-	-
	Subsequent Observations on 7th day	-	-	01	3.3	29	96.7	-	-
	Subsequent Observations on 14th day	-	-	01	3.3	29	96.7	-	-

Table III shows the frequency and percentage distribution of the experimental and control group samples according to level of overall compliance to post hemodialysis instructions before and after intervention.

Before intervention 27-29 (90-96.90%) had average compliance in both experimental and control groups. On the 7th day after intervention 19 (63.30%) of experimental group showed good compliance and 11(36.70%) showed average compliance. On the 14th day after intervention 14(46.70 %) showed excellent

compliance whereas in control group no changes were seen between baseline and subsequent observations.

This table concludes that there was a significant difference in the level of compliance in experimental group before and after the intervention and no difference in the control group which may be due to the effect of intervention given to the experimental group.

Figure 2 Percentage of experimental and control group samples according to the level of compliance to post hemodialysis instructions before intervention.

Figure 3 Percentage of experimental and control group samples according to level of compliance to post hemodialysis instructions on the 7th day after intervention.

Figure 4 Percentage of experimental and control group samples according to the level of compliance to post hemodialysis instructions on the 14th day after intervention

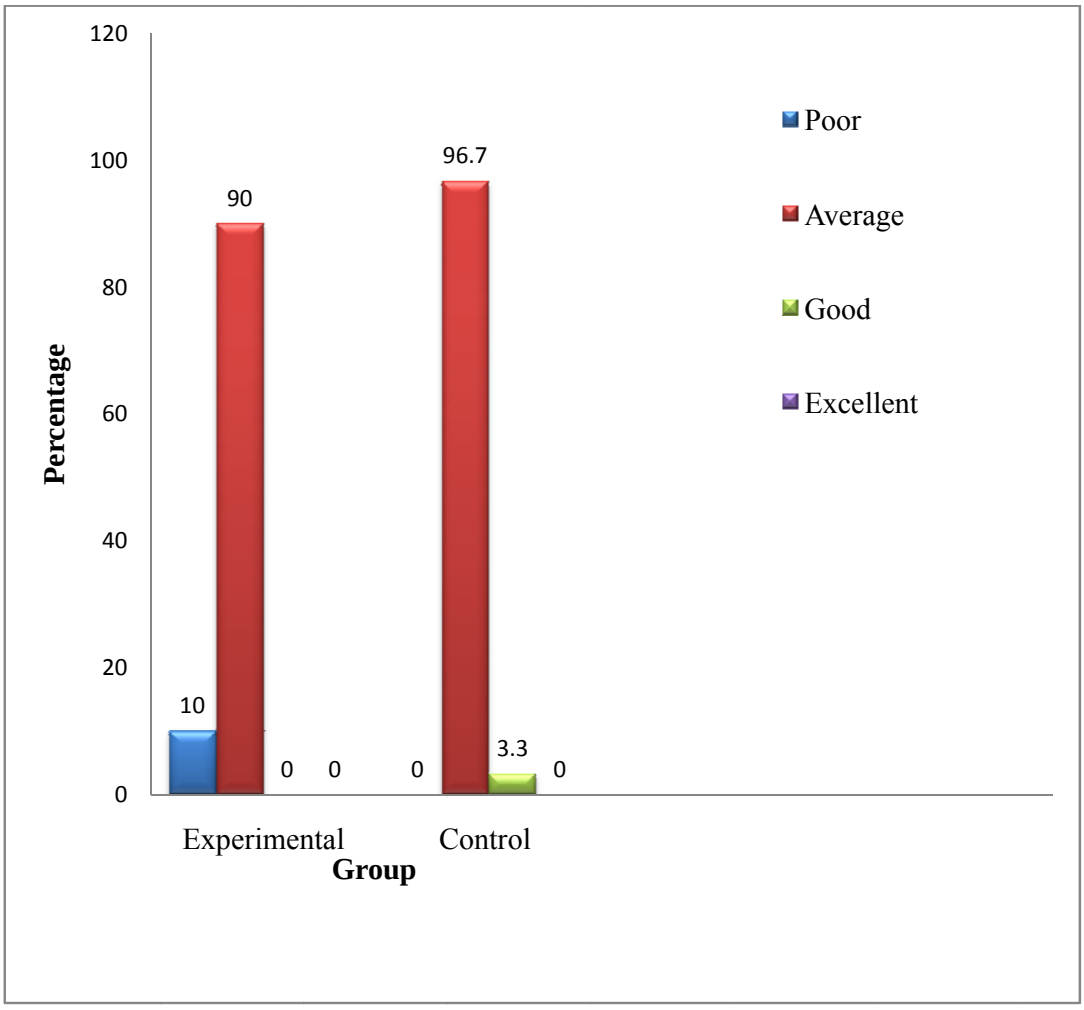

Figure 2 Percentage of experimental and control group samples according to the level of compliance to post hemodialysis instructions before intervention

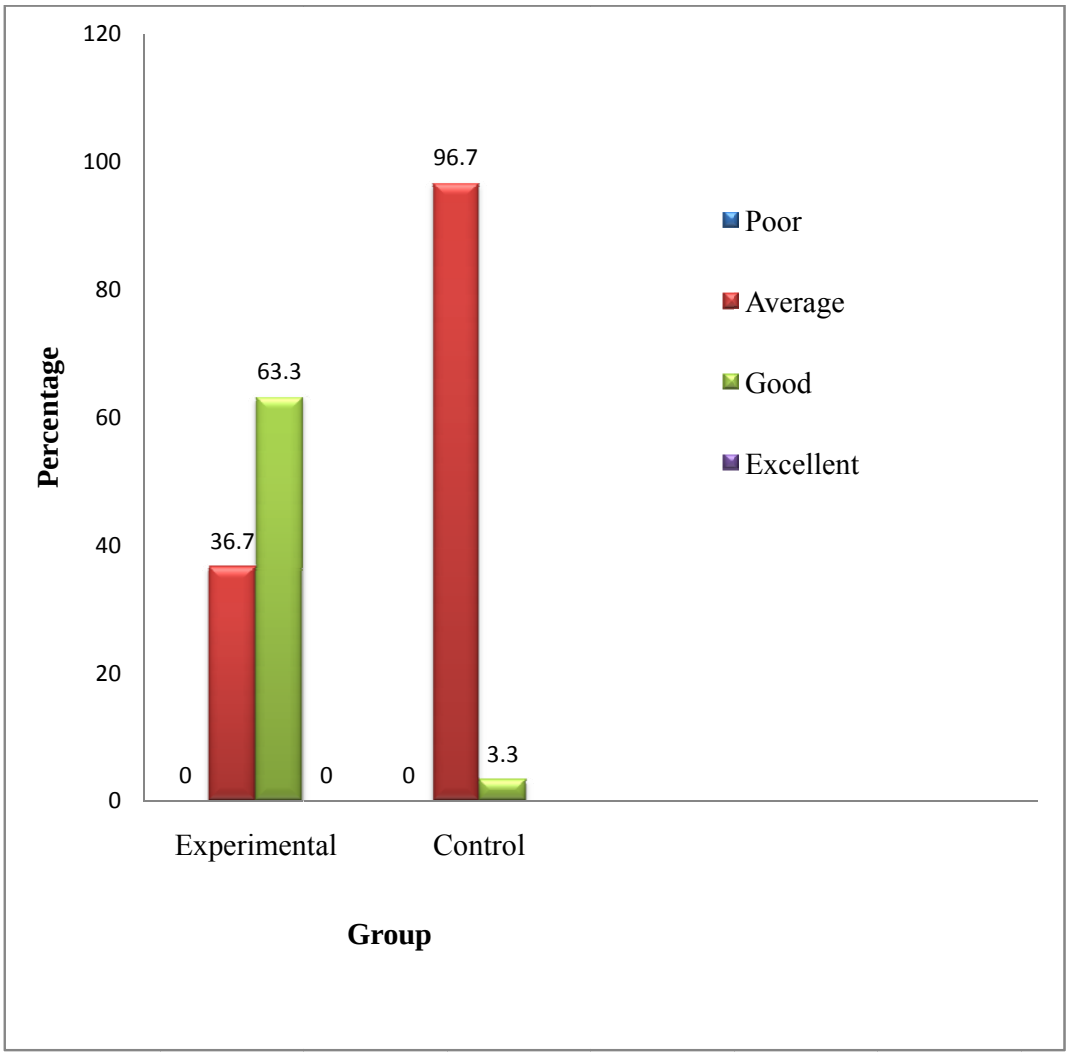

Figure 3 Percentage of experimental and control group samples according to level of compliance to post hemodialysis instructions on the 7th day after intervention.

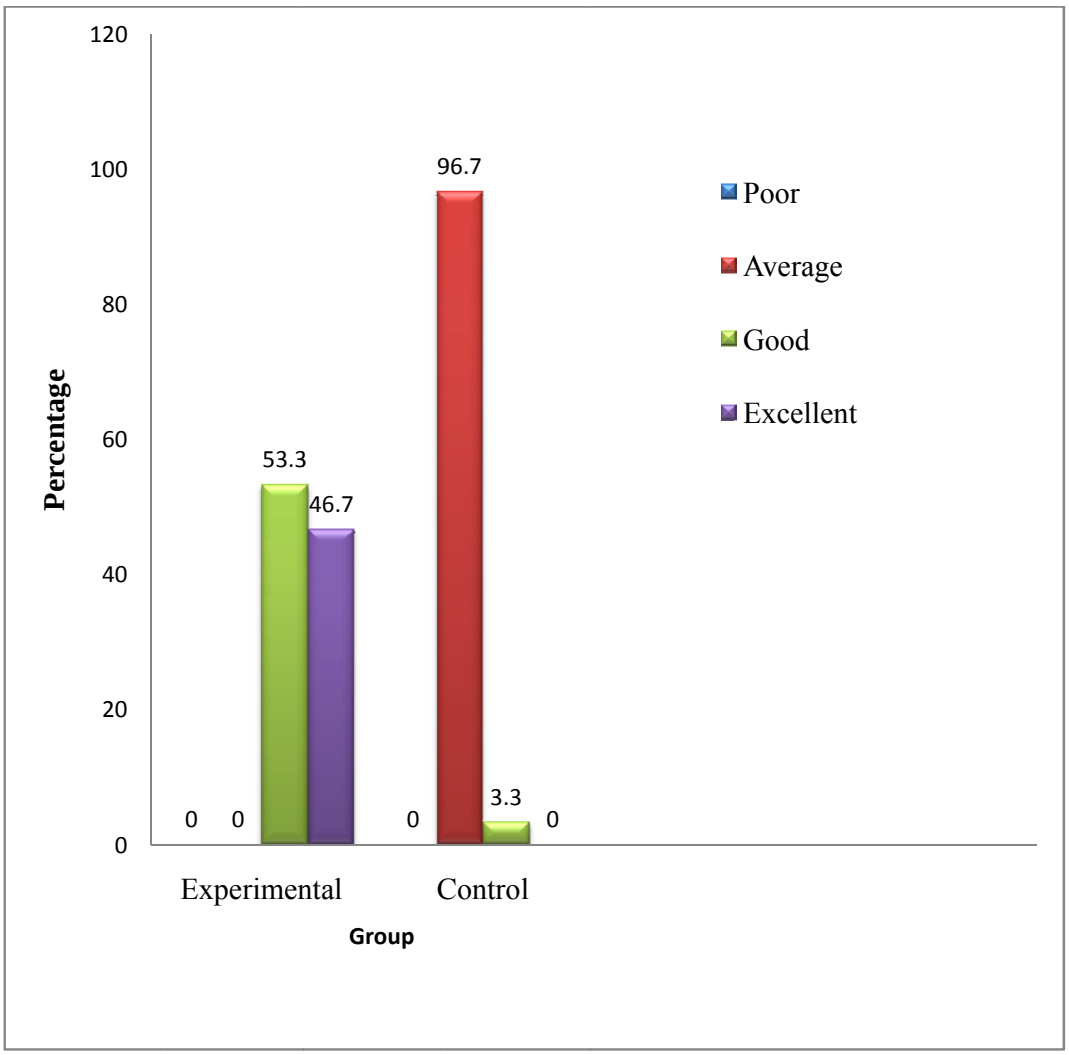

Figure 4 Percentage of experimental and control group samples according to level of compliance to post hemodialysis instructions on the 14th day after intervention.

TABLE IV

FREQUENCY AND PERCENTAGE DISTRIBUTION OF EXPERIMENTAL AND CONTROL GROUP SAMPLES ACCORDING TO LEVEL OF COMPLIANCE ON DRUGS AND FOLLOW UP BEFORE AND AFTER INTERVENTION

N=60

Group	Time of observation	Level of compliance							
		Excellent		Good		Average		Poor	
		F	%	F	%	F	%	F	%
Experimental Group (N=30)	Before Intervention	1	03.30	12	40.00	17	56.70	-	-
	7th day after Intervention	5	16.70	15	50.00	10	33.30	-	-
	14th day after Intervention	12	40.00	18	60.00	-	-	-	-
Control Group (N=30)	Baseline Observation	-	-	-	-	7	23.30	23	76.70
	Subsequent bservations on 7th day	-	-	-	-	7	23.30	23	76.70
	Subsequent Observations on 14th day	-	-	-	-	7	23.30	23	76.70

Table IV shows the frequency and percentage distribution of the experimental and control group samples according to the level of compliance to post hemodialysis instructions on drugs and follow up before and after intervention.

In experimental group before intervention 12-17 (40-56.70 %) showed good and average compliance. On 7th day after intervention 5 (16.70 %) had excellent compliance and remaining were having good and average level of compliance. On 14th day after intervention 12 (40 %) showed excellent compliance and remaining were having good compliance. Whereas in control group 23 (76.70 %) were showing poor compliance and 7 (23.30 %) were having average compliance at baseline observation. The same level of compliance was seen on 7th and 14th day of subsequent observations.

This table concludes that there was a significant difference in the level of compliance in experimental group before and after the intervention and no difference

in the control group which may be due to the effect of intervention given to the experimental group.

TABLE V

FREQUENCY AND PERCENTAGE DISTRIBUTION OF EXPERIMENTAL AND CONTROL GROUP SAMPLES ACCORDING TO LEVEL OF COMPLIANCE ON FLUID RESTRICTION BEFORE AND AFTER INTERVENTION

N=60

Group	Time of observation	Level of compliance							
		Excellent		Good		Average		Poor	
		F	%	F	%	F	%	F	%
Experimental Group (N=30)	Before Intervention	-	-	2	06.70	12	40.00	16	53.30
	7th day After Intervention	-	-	12	40.00	18	60.00	-	-
	14th day After Intervention	12	40.00	17	56.70	1	03.30	-	-
Control Group (N=30)	Baseline Observation	-	-	1	03.30	7	23.30	22	73.30
	Subsequent Observations on 7th day	-	-	1	03.30	7	23.30	22	73.30
	Subsequent Observations on 14th day	-	-	1	03.30	7	23.30	22	73.30

Table V shows the frequency and percentage distribution of the experimental and control group samples according to the level of compliance to post hemodialysis instructions on fluid restriction before and after intervention.

In experimental group before intervention 12-16 samples (40-53.30 %) showed average and poor compliance. On 7th day after intervention 12-18 (40-60 %) samples had good and average compliance. On 14th day after intervention 12 samples (40 %) showed excellent compliance and remaining had good compliance except one with average compliance. Whereas in control group majority 22 samples (73.30 %) showed poor compliance, 7 samples (23.30 %) had average compliance and 1 (3.30 %) with good compliance before intervention. The same level of compliance was seen in the subsequent observation on 7th day and 14th day.

This table concludes that there was a significant difference in the level of compliance to fluid restriction in experimental group before and after the intervention and no difference in the control group which may be due to the effect of intervention given to the experimental group.

TABLE VI

FREQUENCY AND PERCENTAGE DISTRIBUTION OF EXPERIMENTAL AND CONTROL GROUP SAMPLES ACCORDING TO LEVEL OF COMPLIANCE ON DIET RESTRICTION BEFORE AND AFTER INTERVENTION.

N=60

Group	Time of observation	Level of compliance							
		Excellent		Good		Average		Poor	
		F	%	F	%	F	%	F	%
Experimental Group (N=30)	Before Intervention	-	-	5	16.70	25	83.30	-	-
	7th day After Intervention	3	10.00	20	66.70	7	23.30	-	-
	14th day After Intervention	20	66.70	9	30.00	1	03.30	-	-
Control Group (N=30)	Baseline Observation	-	-	7	23.30	23	76.70	-	-
	Subsequent Observations on 7th day	-	-	7	23.30	23	76.70	-	-
	Subsequent Observations on 14th day	-	-	7	23.30	23	76.70	-	-

Table VI shows the frequency and percentage distribution of the experimental and control group samples according to the level of compliance to post hemodialysis instructions on diet restriction before and after intervention.

In experimental group before intervention 25 samples (83.30 %) showed average compliance. On 7th day after intervention 3(10 %) samples had excellent compliance and remaining were distributed in good and average level of compliances. On 14th day after intervention 20 samples (66.70 %) showed excellent compliance and remaining had either good or average level of compliance. Whereas in control group 23 samples (76.70 %) had average compliance and 7 (23.30 %) showed good compliance. The same level of compliance was seen in 7th day and 14th day of observation.

This table concludes that there was a significant difference in the level of compliance in experimental group before and after the intervention and no difference in the control group.

TABLE VII

FREQUENCY AND PERCENTAGE DISTRIBUTION OF EXPERIMENTAL AND CONTROL GROUP SAMPLES ACCORDING TO LEVEL OF COMPLIANCE ON EXERCISE FOR PATENCY OF FISTULA BEFORE AND AFTER INTERVENTION

N=60

Group	Time of observation	Level of compliance							
		Excellent		Good		Average		Poor	
		F	%	F	%	F	%	F	%
Experimental Group (N=30)	Before Intervention	-	-	01	03.30	25	83.30	04	13.30
	7th day After Intervention	-	-	-	-	19	63.30	11	36.70
	14th day After Intervention	19	63.30	11	36.70	-	-	-	-
Control Group (N=30)	Baseline Observation	-	-	02	06.70	23	76.70	05	16.70
	Subsequent Observations on 7th day	-	-	02	06.70	23	76.70	05	16.70
	Subsequent Observations on 14th day	-	-	02	06.70	23	76.70	05	16.70

Table VII shows the frequency and percentage distribution of the experimental and control group samples according to the level of compliance to post hemodialysis instructions on exercise for patency of fistula before and after intervention.

In experimental group before intervention 25 samples (83.30 %) showed average compliance, and 4(13.30%) samples showed poor level of compliance. On 7th day after and intervention 19 (63.30 %) samples were changed to good and remaining were in poor level of compliances. On 14th day after intervention 19 samples (63.30 %) showed excellent compliance and remaining 11(36.7%) showed good level of compliance. Whereas in control group majority 23 (76.70 %) showed average level of compliance and 2 samples (6.70%) showed good compliance and 5 (16.70%) had poor level of compliance. The same level of compliance was seen in subsequent observations on 7th day and 14th day of observation.

This table concludes that there was a significant difference in the level of compliance in experimental group before and after the intervention and no difference in the control group which may be due to the effect of intervention given to the experimental group.

TABLE VIII

OVERALL MEAN COMPLIANCE SCORE AND STANDARD DEVIATION OF EXPERIMENTAL AND CONTROL GROUP SAMPLES TO POST HEMODIALYSIS INSTRUCTION BEFORE AND AFTER INTERVENTION AND LEVEL OF SIGNIFICANCE

N=60

Time of observation	Max score	Experimental group (N=30)			Control group (N=30)			Mean differences	Un paired 't' value P<0.05 Df=58
		Mean score	Mean score%	SD	Mean score	Mean score %	SD		
Before intervention	64	27.63	43.17	6.30	25.47	38.80	4.20	2.167	1.567 NS
7th day after intervention	64	38.10	59.53	7.06	25.43	39.73	4.22	12.67	8.430*
14th day after intervention	64	49.1	76.72	7.28	25.33	39.58	3.90	23.77	15.757*

*** -Significant. NS- Not Significant.** **Table value- 2.05**

Table VIII shows over all mean score of compliance of experimental and control group to post hemodialysis instructions before and after intervention and level of significance.

In experimental group overall mean score before intervention was 27.63(43.17%) whereas in control group the score was 25.47 (38.80%). There was no significant difference in mean score of compliance in experimental and control group before intervention.

On the 7th day of observation the mean score increased from 27.63-38.10 (43.17 % -59.53 %) in experimental group, whereas in control group only a slight difference 25.43 (39.73 %) with mean difference of 12.67 was observed. Statistically

there was a significant difference in mean score between experimental and control group on 7th day after intervention with 't' value of 8.430 ($p<0.05$, df=58).

On the 14th day of observation the mean score increased from 38.10-49.10 (59.53%-76.72 %) in experimental group, whereas in control group only a slight difference 25.33 (39.58 %) with mean difference of 23.77 was observed. Statistically there was a significant difference in mean score between experimental and control group on 14th day after intervention with 't' value of 15.757.

So the hypothesis (H1) there is a significant difference between the mean compliance score in experimental and control group after individualized counseling is accepted.

Figure 5 Overall mean compliance score of experimental and control group before and after intervention in percentage

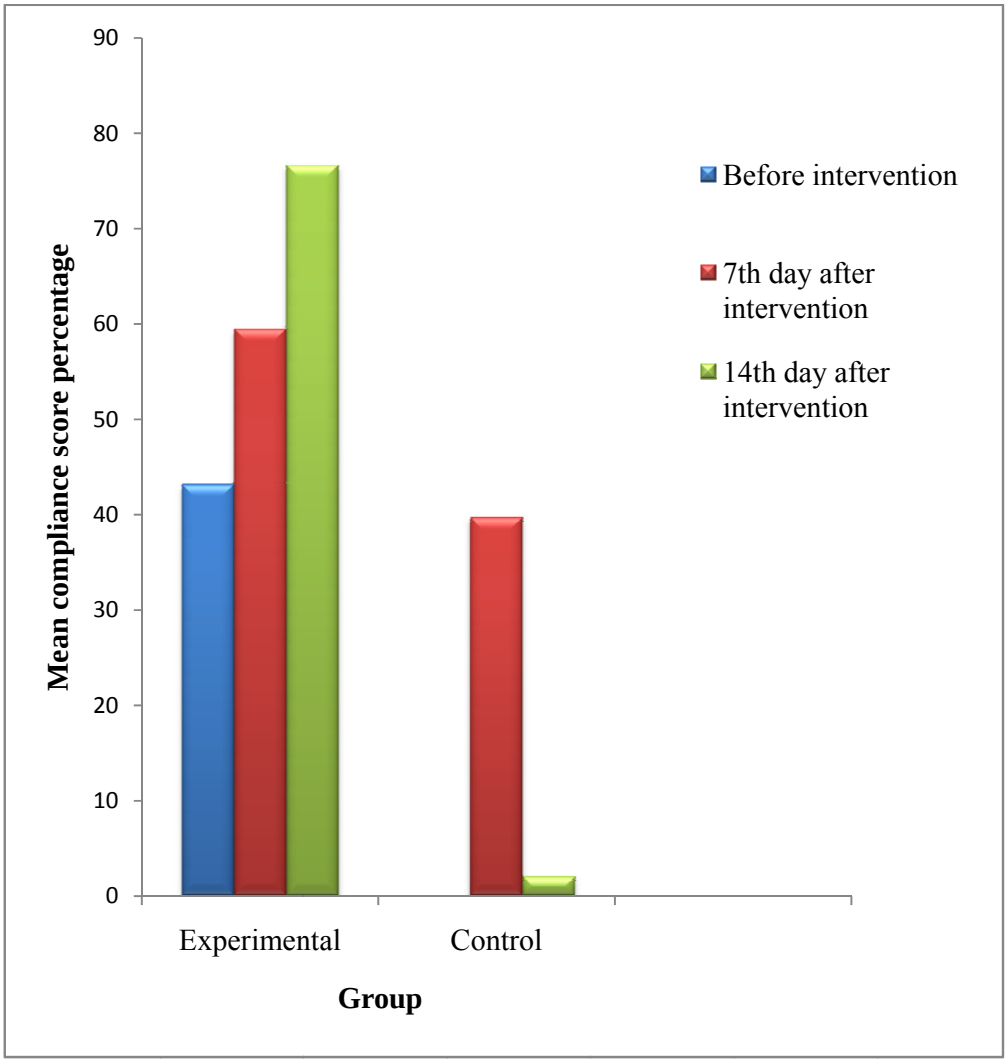

Figure 5 Overall mean score of experimental and control group in compliance to post dialysis instruction before and after the intervention in percentage

TABLE IX

MEAN COMPLIANCE SCORE AND STANDARD DEVIATION OF EXPERIMENTAL AND CONTROL GROUP SAMPLES TO SPECIFIC POST HEMODIALYSIS INSTRUCTIONS BEFORE INTERVENTION AND LEVEL OF SIGNIFICANCE

N=60

Specific Intervention	Max score	Experimental group (N=30)			Control group (N=30)			Mean differences	Un paired 't' value P<0.05 Df=58
		Mean score	Mean score%	SD	Mean score	Mean score %	SD		
Drugs and follow up	24	12.23	50.96	3.65	10.93	45.54	2.68	1.30	1.580 NS
Fluid Restriction	12	3.97	33.08	1.30	3.50	29.16	1.04	0.47	1.534 NS
Diet Restriction	20	8.23	41.10	2.05	7.93	39.65	1.57	0.300	0.637 NS
Exercise for patency of AV fistula	08	3.20	40.00	0.81	3.10	38.75	0.76	0.100	0.495 NS

***-Significant. NS- Not Significant. Table value- 2.05**

Table IX Shows mean compliance score and standard deviation of experimental and control group samples to specific post hemodialysis instructions before intervention and level of significance

In experimental group mean score of drug and follow up before intervention was 12.33 (50.96%) whereas in control group the score was 10.93 (45.54%). In experimental group mean score of fluid restriction before intervention was 3.97 (33.08%), whereas in control group the score was 3.50 (29.16%). In experimental group mean score of diet restriction before intervention was 8.23 (41.10%), whereas in control group the score was 7.93 (39.65%). In experimental group mean score of exercise for patency of A V fistula before intervention was 3.20 (40%), whereas in

control group the score 3.10 (38.75%). There was no significant difference in mean score of compliance to different aspects such as drug and follow up, fluid restriction, diet restriction and exercise for patency of A V Fistula in experimental and control group before intervention.

Figure 6 Mean compliance score of experimental and control group samples to specific post hemodialysis instructions before intervention in percentage and level of significance.

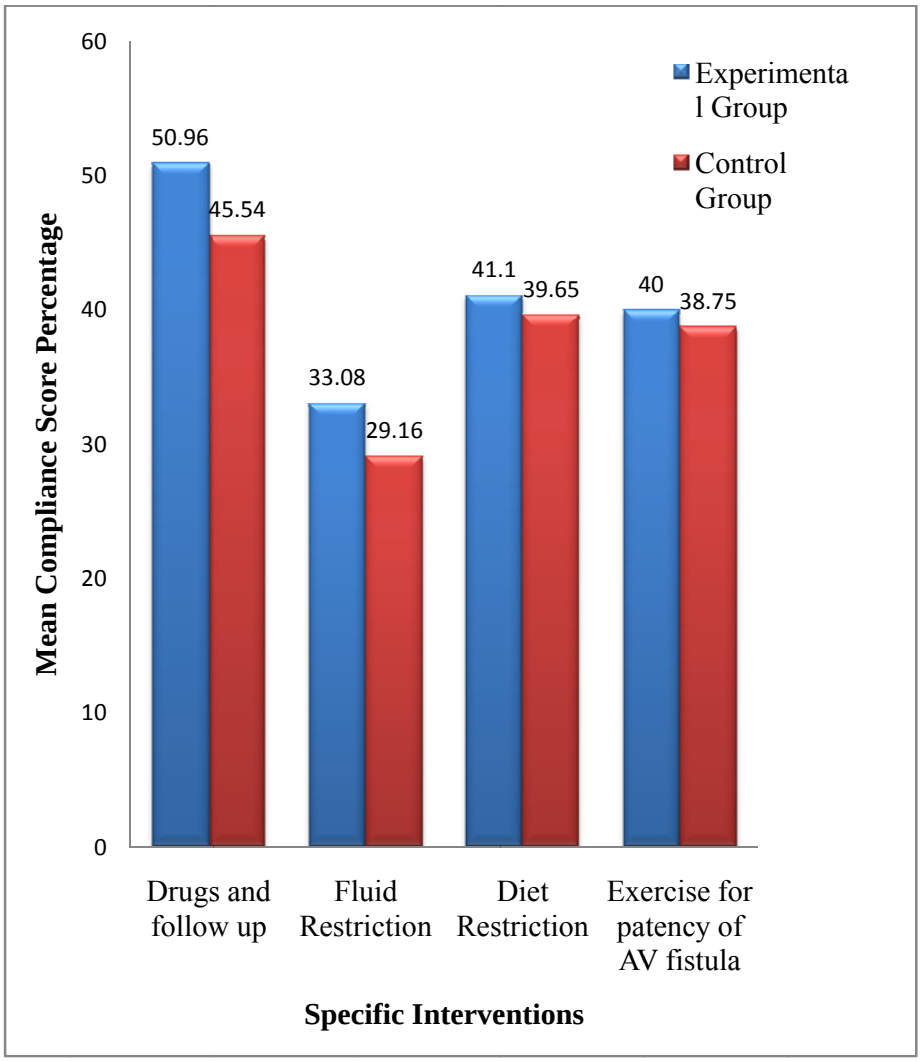

Figure 6 Mean compliance score of experimental and control group samples to specific post hemodialysis instructions before intervention in percentage and level of significance

TABLE X

MEAN COMPLIANCE SCORE AND STANDARD DEVIATION OF EXPERIMENTAL AND CONTROL GROUP SAMPLES TO SPECIFIC POST HEMODIALYSIS INSTRUCTIONS 7TH DAY AFTER INTERVENTION AND LEVEL OF SIGNIFICANCE

N=60

Specific Intervention	Max score	Experimental group (N=30)			Control group (N=30)			Mean differences	Un paired 't' value P<0.05 Df=58
		Mean score	Mean score%	SD	Mean score	Mean score %	SD		
Drugs and follow up	24	15.43	64.29	3.77	10.93	45.54	2.64	4.61	5.360*
Fluid Restriction	12	6.43	32.15	1.38	3.47	28.91	1.07	2.97	9.284*
Diet Restriction	20	11.37	56.85	2.57	7.90	39.50	1.60	3.47	6.273*
Exercise for patency of AV fistula	08	4.87	60.88	1.11	3.13	39.15	0.78	1.733	7.027*

***-Significant. NS- Not Significant. Table value- 2.05**

Table X Shows mean compliance score and standard deviation of experimental and control group samples to specific post hemodialysis instructions 7th day after intervention and level of significance

On the 7th day of observation the mean score of drug and follow up was increased to 15.43 (64.29 %) in experimental group, whereas in control group no difference 10.93 (45.54 %) with mean difference of 4.61 was observed. Statistically there was a significant difference in mean score of compliance to drugs advised and date of follow up between experimental and control groups on 7th day after intervention with 't' value of 5.360($p<0.05$, df=58).

On the 7th day of observation the mean score of fluid restriction was increased to 6.43 (32.15) % in experimental group, whereas in control group only a slight difference 3.47 (28.91 %) with mean difference of 2.97 was observed. Statistically

there was a significant difference in mean score of compliance to fluid restrictions between experimental and control groups on the 7th day after intervention with 't' value of 9.284 ($p<0.05$, df=58).

On the 7th day of observation the mean score of diet restriction was increased to 11.37 (56.85%) in experimental group, where as in control group only a slight difference 7.90 (39.50 %) with mean difference of 3.47 was observed. Statistically there was a significant difference in mean score of compliance to diet restrictions between experimental and control groups on 7th day after intervention with't' value of 6.273($p<0.05$, df=58).

On the 7th day of observation the mean score exercise for patency of A V fistula was increased to 4.87 (60.88%) in experimental group, whereas in control group only a slight difference 3.13 (39.15 %) with mean difference of 1.733 was observed. Statistically there was a significant difference in mean score of compliance to exercise for patency of A V Fistula between experimental and control groups on the 7th day after intervention with 't' value of 7.027($p<0.05$, df=58).

Figure 7 Mean compliance score of post hemodialysis instruction on specific interventions between experimental and control group 7th day after intervention.

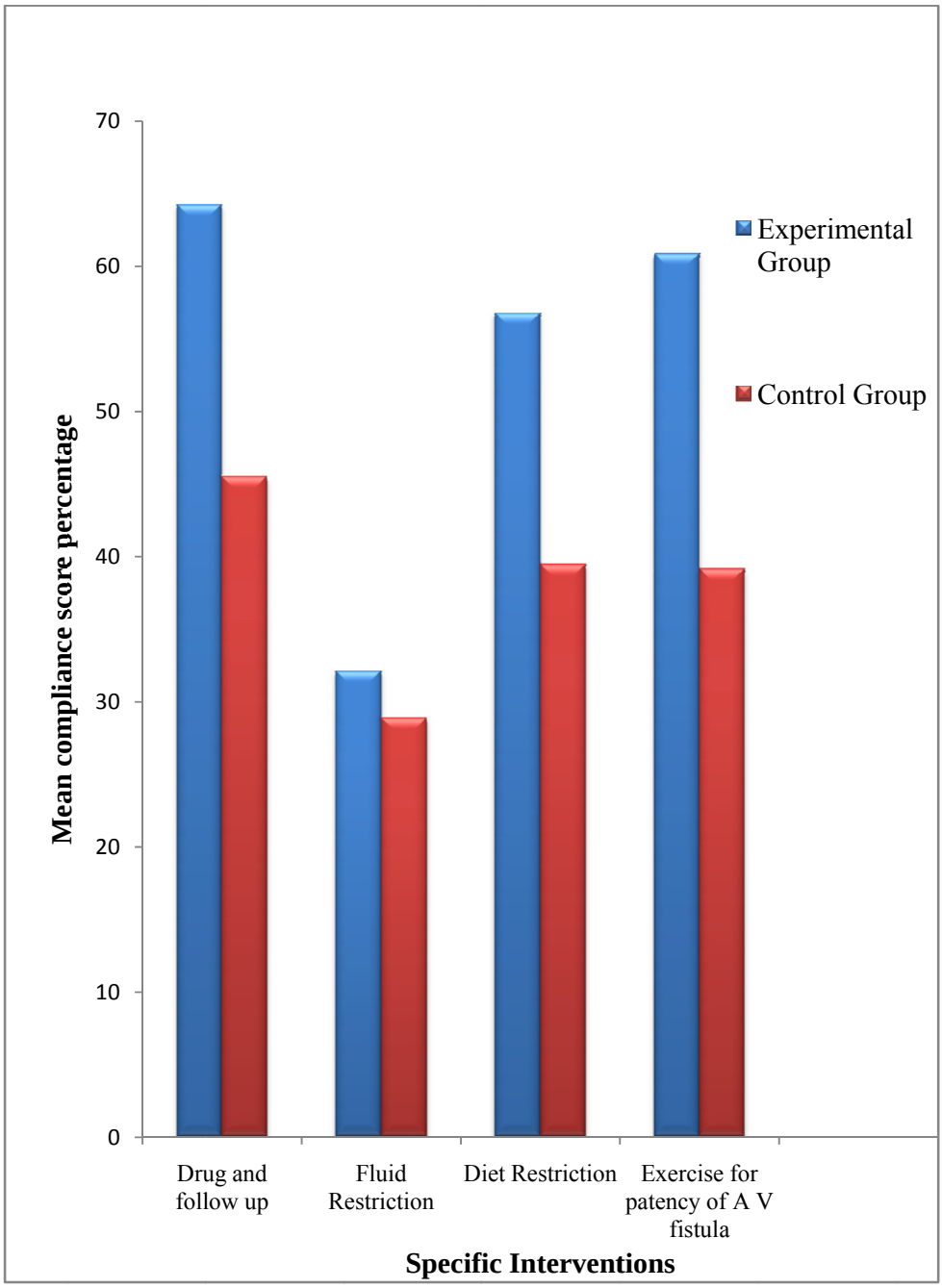

Figure 7 Mean compliance score of post hemodialysis instruction on post hemodialysis instructions between experimental and control group 7th day after intervention.

TABLE XI

MEAN COMPLIANCE SCORE AND STANDARD DEVIATION OF EXPERIMENTAL AND CONTROL GROUP SAMPLES TO SPECIFIC POST HEMODIALYSIS INSTRUCTIONS ON 14TH DAY AFTER INTERVENTION AND LEVEL OF SIGNIFICANCE

N=60

Specific Intervention	Max score	Experimental group (N=30)			Control group (N=30)			Mean differences	Un paired 't' value P<0.05 Df=58
		Mean score	Mean score%	SD	Mean score	Mean score %	SD		
Drugs and follow up	24	17.47	72.79	4.50	10.97	45.71	2.59	6.50	6.854*
Fluid Restriction	12	9.00	75.00	1.53	3.53	29.42	1.04	5.47	16.168*
Diet Restriction	20	15.83	79.15	3.34	7.67	38.65	1.60	8.67	12.029*
Exercise for patency of AV fistula	8	6.80	85.00	1.11	3.17	39.63	0.79	3.17	14.725*

***-Significant. NS- Not Significant. Table value- 2.05**

Table XI Shows mean compliance score and standard deviation of experimental and control group samples to specific post hemodialysis instructions 14th day after intervention and level of significance

On the 14th day of observation the mean score of drug follow up was increased to 17.47 (72.79%) in experimental group, whereas in control group only a slight difference 10.97 (45.71 %) with mean difference of 6.50 was observed. Statistically there was a significant difference in mean score of compliance to drugs advised and date of follow up between experimental and control groups on the 14th day after intervention with 't' value of 6.854 ($p<0.05$, $df=58$).

On the 14th day of observation the mean score of fluid restriction was increased to 9 (75 %) in experimental group, whereas in control group only a slight difference 3.53 (29.42 %) with mean difference of 5.47 was observed. Statistically

there was a significant difference in mean score of compliance to fluid restrictions between experimental and control groups on the 14th day after intervention with 't' value of 16.168 ($p<0.05$, df=58).

On the 14th day of observation the mean score of diet restriction was increased to 15.58 (79.15%) in experimental group, whereas in control group only a slight difference 7.67 (38.65 %) with mean difference of 8.67 was observed. Statistically there was a significant difference in mean score of compliance to diet restrictions between experimental and control groups on the 14th day after intervention with 't' value of 12.029 ($p<0.05$, df=58).

On the 14th day of observation the mean score of exercise for patency of fistula was increased to 6.80 (85 %) in experimental group, whereas in control group only a slight difference 3.17 (39.63%) with mean difference of 3.17 was observed. Statistically there was a significant difference in mean score of compliance to exercise for patency of A V Fistula between experimental and control groups on the 14th day after intervention with 't' value of 14.725 ($p<0.05$, df=58).

Figure 8 Mean compliance score of post hemodialysis instruction on specific interventions between experimental and control group 14th day after intervention in percentage

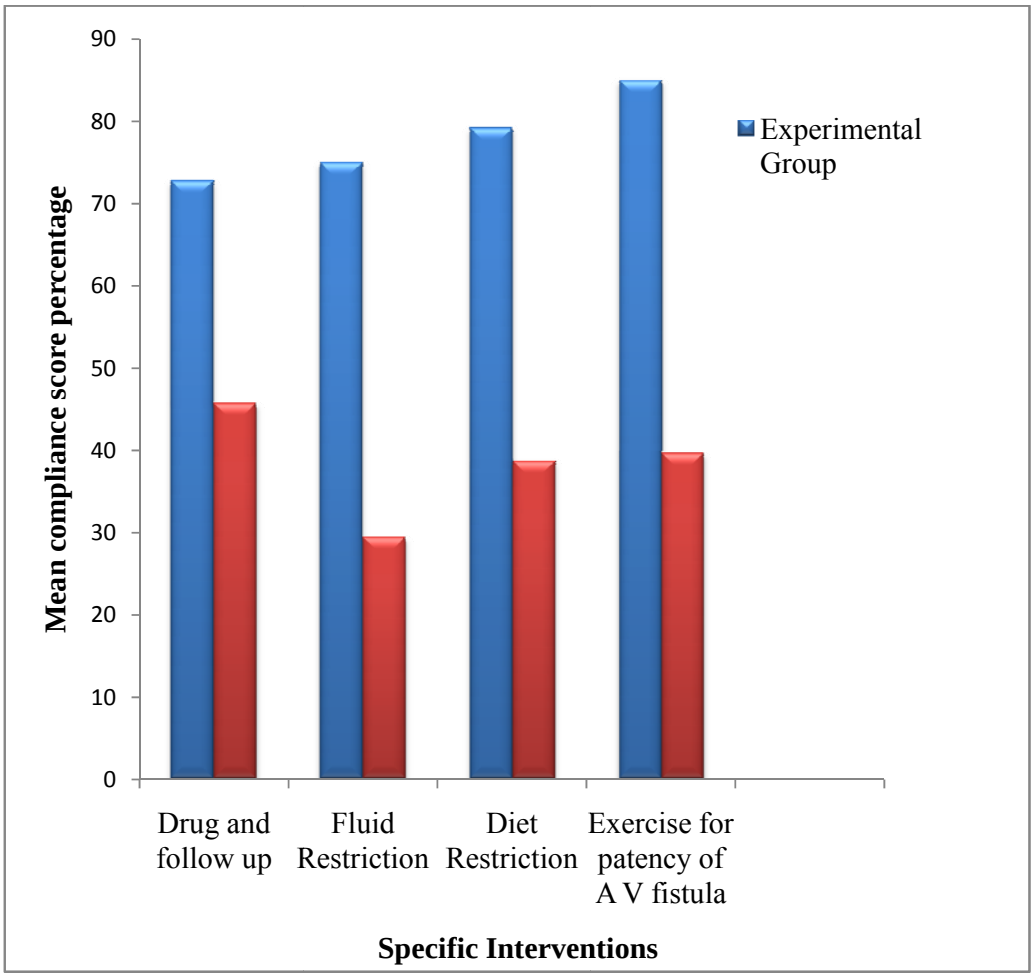

Figure 8 Mean compliance score of post hemodialysis instruction on specific interventions between experimental and control group 14th day after intervention in percentage

Section – 3. Comparison of degree of outcome of hemodialysis in the experimental and control group

TABLE XII

FREQUENCY AND PERCENTAGE DISTRIBUTION OF EXPERIMENTAL AND CONTROL GROUP SAMPLES IN FOUR DEGREE OF OUTCOME TO DIALYSIS BEFORE AND AFTER INTERVENTION

N=60

Degree of outcome	Experimental Group N=30						Control Group N=30					
	Before Intervention		After Intervention				Baseline Observation		Subsequent Observations			
			7th day		14th day				7th day		14th day	
	F	%	F	%	F	%	F	%	F	%	F	%
Excellent	-	-	20	66.7	22	73.3	-	-	01	03.3	-	-
Good	13	43.3	10	33.3	8	26.7	8	26.7	13	43.3	17	56.7
Average	17	56.7	-	-	-	-	22	73.3	16	53.3	13	43.3
Poor	-	-	-	-	-	-	-	-	-	-	-	-

Table XII Shows the frequency and percentage distribution of experimental and control group samples to the degree of outcome of hemodialysis.

In experimental group majority 17 (56.70 %) samples showed average outcome and the remaining showed good outcome. On the 7th day of observation 20 (66.70 %) showed excellent outcome and the remaining were showing good outcome. On the 14th day of observation 22 (73.30 %) showed excellent outcome and remaining showed good outcome. Whereas in control group, majority 22 (73.30 %) showed average outcome and remaining were showing good outcome, there were only slight changes after 7th and 14th day of observation.

In experimental group, before intervention 24-27 (80-90%) of samples showed bleeding, hypersensitivity and restlessness, 15-19 (50-63-30 %) of samples showed other symptoms, Where as in control group before intervention 21-22(70-73.30%) of showed faintness and lack of appetite. 15-19 (50-63.30 %) of showed hypertension, restlessness, purities, nausea, vomiting, blurred vision, numbness and muscle cramps. (Reference to appendix – IX, Page No: 123)

On 7th day after observation, in experimental group 15-18(50-60%)of samples showed numbness and restlessness, 9-12 (30-40 %) of samples showed muscles cramps and numbness, the remaining were scattered in other aspects. Where as in control group 22-28(73.30-93.30 %) of samples showed hypertension, restlessness, blurred vision, faintness and lack of appetite, 13-16 (43.30-53.30%) of samples having muscle cramps, numbness, vomiting and nausea, and remaining were scattered in the other aspects. (Reference to appendix – X, Page No: 124)

On 14th day of intervention 20(60.70%) of samples showed faintness 9-10 (30-33%) of samples showed blurred vision, muscle cramps, none of them showed restlessness, confusion, seizure and shortness of breath. Where as in control group 15-20(50-66.70%) of samples having hypertension, seizure, shortness of breath, vomiting, blurred vision, faintness, lack of appetite and muscles cramps. 10-14 (33.30-46.70 %) of samples having hypersensitivity reactions restlessness, purities, confusion, disorientation and numbness. (Reference to appendix – XI, Page No: 123)

This table concludes that there was a significant difference in the degree of outcome in experimental group before and after the intervention and no difference in the control group which may be due to the effect of intervention given to the experimental group.

TABLE XIII

OVERALL MEAN OUTCOME SCORE AND STANDARD DEVIATION OF HEMODIALYSIS IN EXPERIMENTAL AND CONTROL GROUP TO DIALYSIS BEFORE AND AFTER INTERVENTION AND LEVEL OF SIGNIFICANCE

N=60

Time of observation	Max score	Experimental group (N=30)			Control group (N=30)			Mean differences	Un paired 't' value P<0.05 Df=58
		Mean score	Mean score %	SD	Mean score	Mean score %	SD		
Before intervention	19	9.433	49.65	1.76	9.033	47.54	1.564	0.400	.944 NS
7th day after intervention	19	14.73	77.54	1.32	9.567	51.34	1.755	5.1667	12.734*
14th day after intervention	19	15.30	80.53	1.45	9.400	49.47	1.868	5.900	13.610*

***- Significant. NS- Not Significant** **Table value- 2.05**

Table XIII shows over all mean outcome score of experimental and control group to hemodialysis before and after intervention and level of significance.

In experimental group overall mean score before intervention was 9.433(49.65%) where as in control group the score 9.033 (47.54%). There was no significant difference in mean score of outcome in experimental and control groups before intervention.

On the 7th day of observation the mean score was increased from 9.433-14.7333 (49.65 % -77.54 %) in experimental group, whereas in control group the mean score was 9.567 (51.34 %). Statistically there was a significant difference in mean score of outcome between experimental and control groups on the 7th day after intervention with 't' value of 12.734.

On the 14th day of observation the mean score increased from 14.733-15.300 (77.54%-80.53%) in experimental group, whereas in control group the mean score was 9.40 with a mean difference of 5.90. Statistically there was a significant difference in mean score of outcome between experimental and control groups on the 14th day after intervention with 't' value of 13.610.

So the hypothesis (H_2) there is a significant difference between the mean outcome score in experimental and control group after individualized counseling is accepted.

Figure 9 Mean outcome score of outcome of hemodialysis in experimental and control groups before and after intervention in percentage

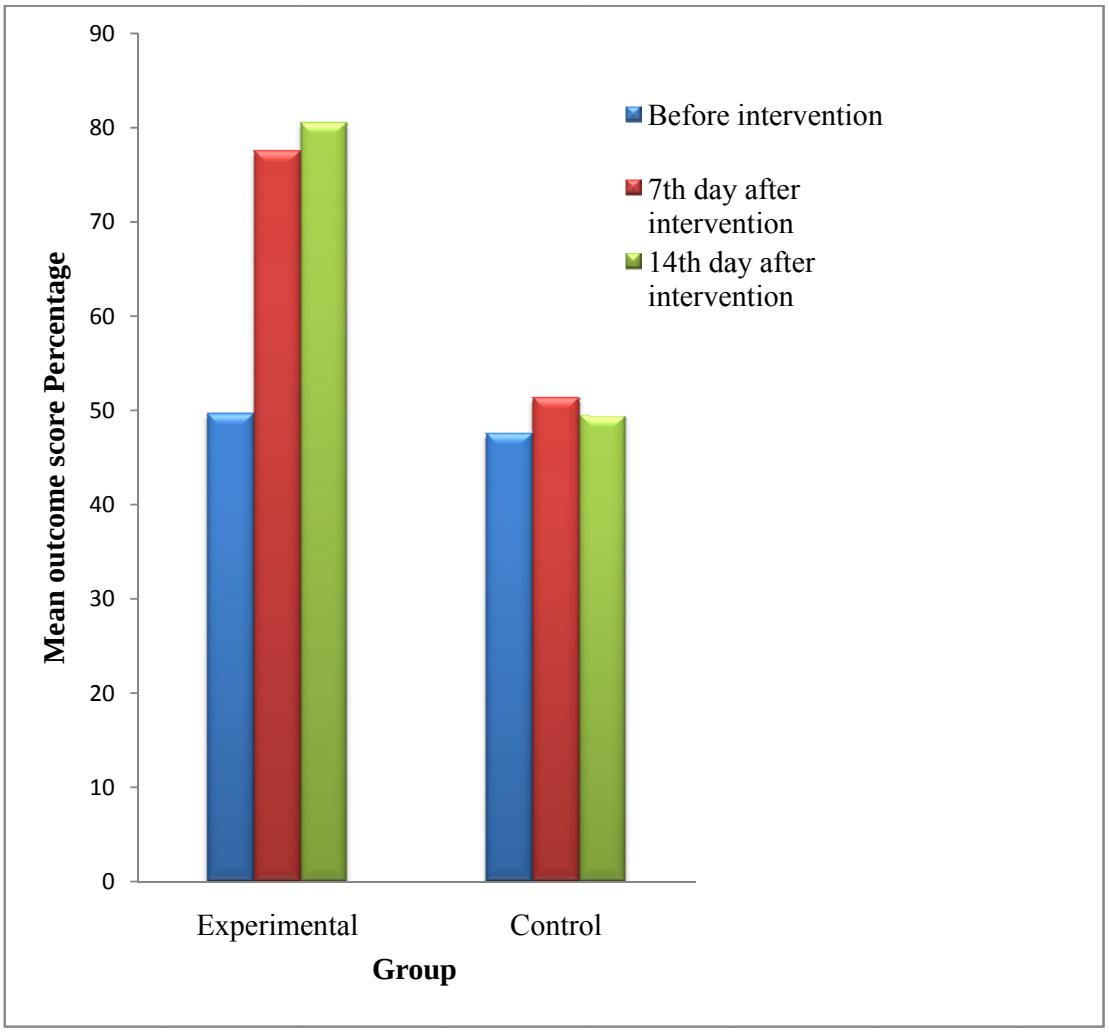

Figure 9 Mean outcome score of outcome of hemodialysis in experimental and control groups before and after intervention in percentage

TABLE XIV

FREQUENCY AND PERCENTAGE DISTRIBUTION OF EXPERIMENTAL AND CONTROL GROUP SAMPLES ACCORDING TO VIEWS ON DIALYSIS BEFORE AND AFTER INTERVENTION

N=60

Aspect	Experimental Group (N=30)						Control Group (N=30)					
	Before Intervention		After Intervention				Baseline Observation		Subsequent Observations			
			7th day		14th day				7th day		14th day	
	F	%	F	%	F	%	F	%	F	%	F	%
Very comfortable	-	-	7	23.30	18	60.00	-	-	-	-	-	-
Somewhat comfortable	-	-	17	56.70	12	40.00	-	-	3	10.00	2	06.70
Not at all comfortable	30	100.00	6	20.00	-	-	30	100.00	27	90.00	28	93.30

Table- XIV shows the frequency and percentage distribution of the experimental and control group samples according to the views on dialysis before and after the intervention.

Before the intervention all samples in experimental and control group 30 (100%) were viewed that going through hemodialysis was 'not at all comfortable'. On the 7th day after the intervention majority 17(56.70%) of samples in experimental group viewed as 'some what comfortable' and remaining samples viewed 'not at all comfortable'. On the 14th day after intervention majority 18(60%) of samples in experimental group viewed as 'very comfortable' and remaining viewed as 'some what comfortable'. Whereas in control group, 7th day after intervention and 14th day after intervention majority 27-28(90-93.30%) of samples viewed as 'not at all comfortable'.

This table concludes that there was a significant difference in the views of the sample regularly hemodialysis treatment in experimental group before, the 7th and 14th day after the intervention and no difference in the control group which may be due to the effect of intervention given to the experimental group.

TABLE XV

MEAN SCORE OF VIEWS AND STANDARD DEVIATION ON DIALYSIS IN EXPERIMENTAL AND CONTROL GROUP BEFORE AND AFTER INTERVENTION AND LEVEL OF SIGNIFICANCE

N=60

Time of observation	Max score	Experimental group (N=30)			Control group (N=30)			Mean differences	Un paired 't' value P<0.05 Df=58
		Mean score	Mean score%	SD	Mean score	Mean score%	SD		
Before intervention	3	1.00	33.33	0.00	1.00	33.33	0.00	0	-
7th day after intervention	3	2.033	67.76	0.669	1.100	36.67	0.305	0.933	6.955*
14th day after intervention	3	2.600	86.67	0.498	1.0667	35.56	0.254	1.533	15.020*

***- Significant. NS- Not Significant Table value- 2.05**

Table XV shows mean score of views and standard deviation on dialysis in experimental and control groups before and after intervention and level of significance.

In experimental group and control group overall mean score before intervention was 1.00(33.33%). There was no significant difference in mean view score in experimental and control groups before intervention.

On the 7th day of observation the mean score increased from1.00-2.033 (33.33 % -67.76 %) in experimental group, whereas in control group only a slight difference 1.100(36.67 %) with mean difference of 0.933 was observed. Statistically there was a significant difference in mean score between experimental and control groups on the 7th day after intervention with 't' value of 6.955.

On the 14th day of observation the mean score was increased from 2.033-2.600(67.76%-86.67%) in experimental group, whereas in control group only a slight

difference of 1.533 was observed. Statistically there was a significant difference in mean score between experimental and control groups on the 14th day after intervention with 't' value of 15.020.

This table concludes that there was a significant difference in the views of the sample to the dialysis treatment in experimental group before, the 7th and 14th day after the intervention and no difference in the control group which may be due to the effect of intervention given to the experimental group.

Figure 10 Mean score of view of experimental and control groups to the hemodialysis before and after intervention in percentage

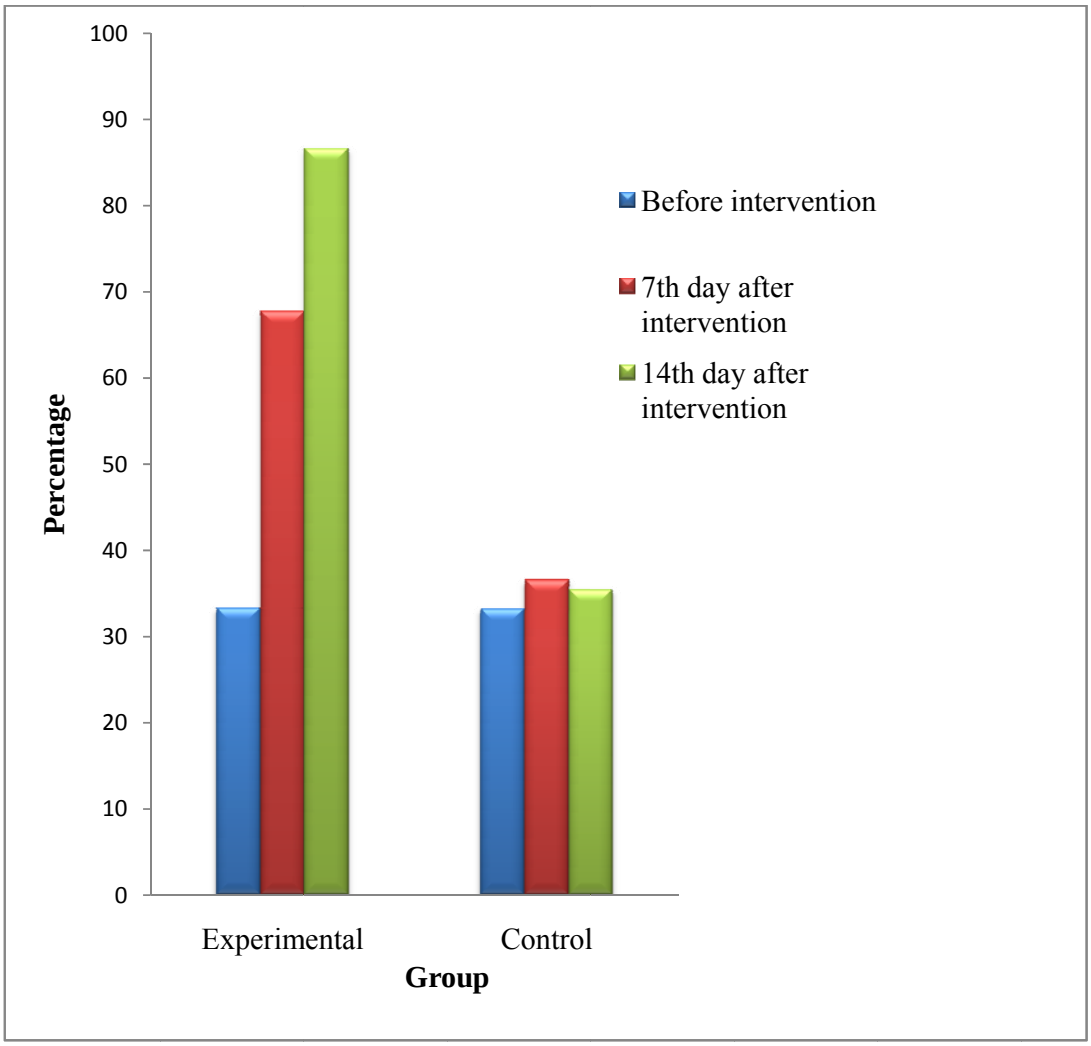

Figure 10 Mean score of view of experimental and control groups to the hemodialysis before and after intervention in percentage

Section – 4 Association of selected demographic variables with level of compliance to post dialysis instructions before the intervention

Table-XVI

ASSOCIATION OF SELECTED PERSONAL CHARACTERISTICS WITH LEVEL OF COMPLIANCE TO POST HEMODIALYSIS INSTRUCTIONS BEFORE THE INTERVENTION

N=56**

SI.No.	Characteristics	Average		$\chi 2$ value	$\chi 2$ table value $p < 0.05$
		F	%		
1.	**Age**				
	➢ 25-35 years	14	25.00		Df=4
	➢ 36-45 years	08	14.29	5.25	
	➢ 46-55years	16	28.57	NS	9.49
	➢ 56-65 years	11	19.64		
	➢ More than 65 years	07	12.50		
2.	**Sex**				Df=1
	➢ Male	34	60.70	2.57	
	➢ Female	22	39.30	NS	3.84
3.	**Educational Status**				Df=4
	➢ No schooling	05	08.92		
	➢ Primary school	17	30.36		9.49
	➢ High school	15	26.79	9.36	
	➢ Higher secondary	07	12.50	NS	
	➢ Graduate	12	21.43		
4.	**Occupation**				
	➢ Farmer	08	14.29		Df=4
	➢ Laborer	03	05.36	18.57*	
	➢ Private employee	21	37.50		9.49
	➢ Government	08	14.29		
	Employment	16	28.57		
	➢ Unemployed				
5.	**Marital status**				
	➢ Single	05	08.93		Df=3
	➢ Married	46	82.14	84.98*	
	➢ Widower	03	05.36		7.82
	➢ Separated	02	03.57		

***-Significant. NS- Not Significant** ****four samples are excluded**

Table-XVI shows the association between the average level of compliance to post hemodialysis instructions and personal characteristics.

Table-XVI shows the association between the average level of compliance to post hemodialysis instructions and personal characteristics.

Majority of the samples (n=56) are distributed in average level and 4 samples are included in good level of compliance. Table shows that there is no association between age, sex and education status and the average level of compliance to post hemodialysis instructions of the sample before intervention. However there is a significant association between the average level of compliance to post hemodialysis instructions and occupation ($\chi 2$ value=18.57, Df=4, $p < 0.05$) and marital status ($\chi 2$ value=18.57, Df=3, $p < 0.05$) before intervention and no association seen with other demographic variables such as age, sex and educational status.

TABLE-XVII

ASSOCIATION OF LEVEL OF COMPLIANCE TO POSTDIALYSIS INSTRUCTIONS WITH DISEASE CONDITION AND DIALYSIS INFORMATIONS BEFORE THE INTERVENTION

N=56**

SI.No	Characteristics	Average		χ^2 value	χ^2 table value $p < 0.05$
		F	%		
1.	**Presence of any systemic diseases**				
	➢ Hypertension	21	37.50	33.36*	Df=3
	➢ Diabetes Mellitus	03	05.36		
	➢ Both	28	50.00		7.82
	➢ None	04	07.14		
2.	**Duration of hemodialysis**				
	➢ 1-6 months	02	3.57		
	➢ 6 months – 1 year	16	28.57		Df=3
	➢ 1-2 years	29	51.79	28.49*	
	➢ More than 2 years	09	16.07		7.82
3	**Number of dialysis per week**				
		03	05.36		Df=3
	➢ Daily	32	57.14	36.49	
	➢ Trice in a week	15	44.64	NS	7.82
	➢ Twice in a week	06	10.71		
	➢ Once in a week				
4	**Type of drug currently taken**				Df=3
		19	33.93		
	➢ Hypertensive drug	02	3.57	19.92*	7.82
	➢ Diabetic Drug	24	42.86		
	➢ Both	11	19.64		
	➢ None				
5	**Weight gain between two dialysis**				Df=5
	➢ 0-0.5 Kg	06	16.71		
	➢ 0.6 -1 Kg	15	26.79	7.174	11.07
	➢ 1.1-1.5Kg	06	10.71	NS	
	➢ 1.6-2 Kg	07	12.50		
	➢ 2.1-2.5Kg	10	17.85		
	➢ More than 2.6 Kg	12	21.43		

***-Significant. NS- Not Significant. **four samples are excluded**

Table- XVII Shows the association between the average level and disease condition and dialysis information

Table-XVII shows the association between the average level and disease condition and dialysis information

Majority of the samples (n=56) are distributed in average level and 4 samples are included in good level. Table shows that there is no association between number of dialysis per week and weight gain between two dialysis and the average level of compliance to post hemodialysis instructions of the samples before intervention. However there is a significant association between the average level of compliance to post hemodialysis instructions and presence of systemic disease ($\chi 2$ value=33.36, Df=3, $p < 0.05$), duration of dialysis ($\chi 2$ value=28.49, Df=3, $p < 0.05$) and type of drugs currently taken ($\chi 2$ value=19.92, Df=3, $p < 0.05$) before intervention and no association seen with other variables such as number of dialysis per week and weight gain between two dialysis.

DISCUSSION

CHAPTER V

DISCUSSION

In the discussion section, the researcher draws conclusions about the meaning and implications of the finding. This section tries to unravel what the results mean, why things turned out the way they did and how the results can be used in practice.

The study focused on assessing the effectiveness of individualized counseling on compliance to post dialysis instructions and outcome of hemodialysis among patients undergoing regular hemodialysis. This chapter presents the main findings and its discussion.

1. Personal characteristics of the experimental and control groups

Table I- Explains the personal characteristics of the caregivers in experimental and control groups. The data showed that most of the samples were aged between 46-55years in experimental and 25-35 years in control groups, most of them were males, majority having primary or high school education and most of them were unemployed or private employed.

2. Data regarding the disease condition and dialysis information.

Table II- Explains the data regarding the disease condition and dialysis information. The findings revealed that most of the samples were undergoing dialysis for one to two years and undergoing thrice in a week. Majority of them having weight gain of 0.6Kg- 1Kg. Majority of them having both hypertension and diabetes mellitus and undergoing treatment for that.

The present study findings is supported by a study done earlier by **Mahboob Rahman MD.et al. (2005**) to assess Interdialytic weight gain, compliance with dialysis regimen, and age related blood pressure in hemodialysis patients. The results showed that sixty-three percent of the patients were hypertensive, patients skipping or shortening one or more dialysis treatments had higher blood pressure, greater interdialytic weight gain and noncompliance with dialysis regimen.

3. Level of compliance of the experimental and control groups to the post hemodialysis instructions.

Tables III, IV, V, VI, VII, VIII, IX, X, XI, explain the level of compliance of the experimental and control groups to the post hemodialysis instructions.

Table III explains the frequency and percentage distribution of the experimental and control group samples according to level of overall compliance to post hemodialysis instructions before and after intervention. In both experimental and control groups majority of samples 29(90%) showed average level of compliance before intervention. After 7th day and 14th day of intervention the experimental group showed significant improvement in the level of compliance whereas control group remained in the same level of compliance observed before intervention.

The present study revealed that, the levels of compliance were increased in experimental group who received the counseling. Whereas in the control group there were no improvements in the level of compliance.

The present study findings are supported by a study done earlier by **Karen S. Servilla,et.al.(2002)** regarding a composite index of compliance for chronic hemodialysis patients. The results showed that 8-12 % of samples showed perfect compliance with Inter Dialytic Weight Gain and 68% of samples showed pre-dialysis serum potassium and phosphorus control compliance. Severe and repeated non-compliance ranged between 8% (skipping HD sessions) and 20% (hyperkalemia and hyperphosphatemia).

Table IV explains the frequency and percentage distribution of the experimental and control group samples according to the level of compliance to post hemodialysis instructions on drugs and follow up before and after intervention.

In experimental group majority of samples17 (56.79%) showed average level of compliance and control group majority of samples 23(76.70%) showed poor level of compliance before intervention. On the 7th day after intervention 15 (50%) samples showed good compliance and 5 (16.70%) samples showed excellent compliance in experimental group. On the 14th day after intervention, in experimental group, 18 (60 %) samples showed good compliance and 12 (40%) samples showed excellent compliance. Whereas control group remained in the same level of compliance on drug advised and date of follow up in the baseline and subsequent observations.

The present study revealed that, the levels of compliance increased in experimental group who received the counseling. Whereas in the control group there were no improvements in the level of compliance.

The present study findings are supported by a study done earlier by **Bame Sherry I.et.al. (2000)** regarding variation in hemodialysis patient compliance according to demographic characteristics. The results showed that few patients were noncompliant with diet regimens (9% with protein and 2% with potassium restrictions) but half were noncompliant in taking medication (50.2%) and fluid restrictions (49.5%).

Table V explains the frequency and percentage distribution of the experimental and control group samples according to the level of compliance to post hemodialysis instructions on fluid restriction before and after intervention. In experimental group majority of samples 16 (53.30%) showed poor level of compliance and control group majority of samples 22(73.30%) showed poor level of compliance before intervention. On the 7^{th} day after intervention 12-18 (40-60 %) samples had average and good level of compliance and on the 14^{th} day after intervention 12 (40 %) samples showed excellent level of compliance in the experimental group. Whereas control group remained in the same level of compliance on fluid restrictions in the baseline and subsequent observations.

The present study revealed that, the levels of compliance increased in experimental group who received the counseling. Whereas in the control group there were no improvements in the level of compliance to post hemodialysis instructions on fluid restriction.

The present study findings are supported by a study done earlier by **Rambod Masoume MSc.et.al. (2010)** on dietary and fluid adherence in Iranian hemodialysis patients. The results showed that 56% did not adhere to fluid restrictions.

Table VI shows the frequency and percentage distribution of the experimental and control groups samples according to the level of compliance to post hemodialysis instructions on diet restriction before and after intervention.

In experimental group 25 samples (83.30%) and in control group 23 samples (76.70%) showed average level of compliance before intervention. On the 7th day after intervention in experimental group 3(10 %) samples showed excellent level of compliance and on the 14th day after intervention also 20 (66.70 %) samples showed excellent level of compliance. Whereas the control group remained in the same level of compliance as seen before intervention.

The present study revealed that, the levels of compliance were increased in experimental group who received the counseling. Whereas in the control group there were no improvements in the level of compliance to post hemodialysis instruction on diet restriction.

The present study findings are supported by a study done earlier by **Durose C.L. (2010)** regarding knowledge of dietary restrictions and the medical consequences of noncompliance by patients on hemodialysis on dietary compliance. The results showed that more than one third of patients were noncompliant with at least one dietary restriction.

Table VII explains the frequency and percentage distribution of the experimental and control group samples according to the level of compliance to post hemodialysis instructions on exercise for patency of A V fistula before and after intervention.

In experimental group majority of samples 25 (83.30%) showed average level of compliance and in control group majority of samples 23(76.70%) showed average level of compliance before intervention. In experimental group, on the 7th day after intervention 19 (63.30 %) samples were changed to good level of compliance and on the 14th day after intervention 19 (63.30 %) showed excellent level of compliance. Whereas in control group remained in the same level of compliance on exercise for the patency of AV fistula in the baseline and subsequent observations.

The present study revealed that, the levels of compliance were increased in experimental group who received the counseling. Whereas in the control group there were no improvements in the levels of compliance to post hemodialysis instruction on exercise for the patency of AV fistula.

The present study findings were supported by a study done earlier by **Bradley S. Dixon.et.al (2010)** on the effect of exercise on endothelial function and vascular compliance in chronic kidney disease. The result showed that majority (61.2%) of experimental groups showed perfect endothelial function and venous compliances.

Table VIII explains over all mean score of compliance of experimental and control group to post hemodialysis instructions before and after intervention and level of significance. Here, the data suggested that the mean knowledge score of experimental (27.63) and control group (25.47) were showed a slight difference before intervention, after the 7^{th} day of intervention mean score of experimental group (38.10) were higher than the mean score of control group (25.43), after the 14^{th} day of intervention mean score of experimental group (49.1) were higher than the mean score of control group (25.33). So, the hypothesis (H_1), there will be a significant difference between the overall mean score of compliance to post hemodialysis instructions of experimental and control group after intervention was accepted.

Table IX explains mean compliance score and standard deviation of experimental and control group samples to specific post hemodialysis instructions before intervention and level of significance. Before the intervention statistically there was no significant difference seen in specific aspects of the post dialysis instructions such as drugs and follow up 10.93 (45.54%), fluid restriction3.97 (33.08%), diet restriction 8.23 (41.10%), and exercise for the patency of fistula3.20 (40%). The present study revealed that, the levels of compliance in experimental and control group were statistically not significant before intervention.

Table X explains mean compliance score and standard deviation of experimental and control group samples to specific post hemodialysis instructions 7^{th} day after intervention and level of significance. On 7^{th} day after the intervention statistically there is a significant difference seen in specific aspects of the post dialysis instructions in experimental such as drugs and follow up 15.43 (64.29 %) ,fluid restriction 6.43 (32.15) %, diet restriction 11.37 (56.85%) and exercise for the patency of fistula 4.87 (60.88%). The present study revealed that, the level of compliance was increased in experimental group who received the counseling on the 7^{th} day after intervention.

Table XI Shows mean compliance score and standard deviation of experimental and control group samples to specific post hemodialysis instructions 14th day after intervention and level of significance. On 14th day after the intervention statistically there is a significant differences seen in mean compliance score of specific aspects of the post dialysis instructions such as drugs and follow up 17.47(72.79%), fluid restriction 9.00 (75%), diet restriction 15.83 (79.15%) and exercise for the patency of fistula 6.80(85%). The present study revealed that, the level of compliance was increased in experimental group who received the counseling on the 14th day after intervention.

4. **Degree of outcome of the experimental and control group to the hemodialysis**

Tables XII, XII, XIV, XV explains the degree of outcome of the experimental and control group to the hemodialysis

Table XII Shows the frequency and percentage distribution of experimental and control groups samples to the degree of outcome of hemodialysis. In experimental group majority 17 (56.70 %) samples showed average outcome before intervention, in control group majority 22 (73.30 %) showed average outcome and in experimental group a marked differences seen from poor and average level to excellent and good level of outcome to hemodialysis. After the 7th day and 14th day of intervention, the experimental group showed significant improvement in the degree of outcome, whereas control group remained in the same before intervention.

The present study revealed that, the degree of outcome was increased in experimental group who received the counseling, whereas in the control group there was no improvement in the degree of outcome.

Table XIII shows over all mean outcome score of experimental and control group to hemodialysis before and after intervention and level of significance. In experimental group overall mean score before intervention was 9.433(49.65%) whereas in control group the score 9.033 (47.54%), on the 7th day of observation the mean score was 14.7333 (77.54 %), whereas in control group only a slight difference 9.567(51.34 %) seen. On the 14th day of observation the mean score was increases from 15.300 (77.54%-80.53%), whereas in control group only a slight difference of

9.400 (49.47 %) seen. Statistically there was a significant difference in compliance mean score between experimental and control group on the 14th day after intervention. So the hypothesis (H2) there will be a significant difference between the mean score of degree of outcome of patients undergoing hemodialysis in experimental and control groups after the individualized counseling was accepted.

Table- XIV shows the frequency and percentage distribution of the experimental and control group samples according to the views on dialysis before and after the intervention. Majority 30 (100%) samples in experimental and control group viewed as 'not at all comfortable' before intervention. On the 7th and 14th day after the intervention in experimental group a marked difference showed in the view of the sample to the dialysis treatment, whereas in control group there were only a slight change occurs. The marked changes occurred in experimental group and slight changes occurred in control group showed the effect of Individualized counseling.

Table XV shows mean score of views and standard deviation on dialysis in experimental and control groups before and after intervention and level of significance. In experimental group and control groups overall mean score before intervention was 1.00(33.33%). On the 7th day of observation the mean score was increases from 2.033 (67.76 %), whereas in control group only a slight difference 1.100(36.67 %) with mean difference of 0.933. On the 14th day of observation the mean score was increases from 2.600(86.67%), whereas in control group only a slight difference 1.0667 (35.56%), statistically there was a significant difference in compliance mean score between experimental and control group. It showed the effectiveness of individualized counseling for the compliance to post dialysis instruction and outcome of the sample undergo hemodialysis before and after intervention in three observations.

5. Association of study variables with selected demographic variables

Tables XVI and **XVII** explain the association of study variables with selected demographic variables

Table-XX shows the association between the average level and personal characteristics. The table showed that there was a significant association between the compliance to post dialysis instructions, occupation and marital status before

intervention and no association seen with other demographic variables such as age, sex and education status of the sample before intervention

Table-XXI Shows the association between the average level and disease condition and dialysis information. The table showed that there was a significant association between the compliance to post dialysis instruction and presence of systemic disease, duration of dialysis and type of drugs currently taken before intervention and no association was seen with other demographic variables such as number of dialysis per week and weight gain between two dialysis before intervention.

SUMMARY,

FINDINGS, CONCLUSION,

IMPLICATION AND

RECOMMENDATIONS

CHAPTER VI

SUMMARY, CONCLUSION, IMPLICATION AND RECOMMENDATIONS

In this chapter, Summary of the study, Summary of the findings, Conclusions and Recommendations are presented.

Summary of the study

The main aim of the study was to evaluate the effect of individualized counseling on compliance to post dialysis instruction and outcome of hemodialysis among patients undergoing regular hemodialysis.

The conceptual framework of the study was based on the modified Glanz's Health Belief Model (2011). Quasi experimental pre and post test control group design was considered for this study. The independent variable was individualized counseling and dependent variables were outcome of hemodialysis and compliance to post dialysis instructions.

The study was conducted in the dialysis department of a selected hospital at Perinthalmanna, Kerala. The data was collected for 30 days. Non probability purposive sampling method was adopted for the selection of the sample. The total sample of the study consisted of 60 patients who underwent hemodialysis therapy. The data was collected using a structured interview schedule, and an observational check list. The reliability of the interview schedule was tested by split half method and the observational checklist by inter rater method. The data analysis and interpretation were done by using descriptive and inferential statistics.

SUMMARY OF THE FINDINGS

1. Personal characteristics.

In experimental group majority 36.70 % (n=11) were between the age group of 25-35 years where as in control group majority 40% (n=12) were between the age group of 46-55 years. In experimental group 66.70% (n=20) were males and 33.30% (n=10) were females, where as in control group 56.70% (n=17) were males and 43.30% (n=13) were females, majority 8-6 of samples (20 -26.70 %) had in secondary education, and 9-11 of samples (30-36.70 %) had primary and high school education.

In experimental group 9 samples (30 %) were graduate were as in control group 4 samples (13.30%) were graduates, and majority 43.30 %(n=13) were private employees. Where as in control group majority 33.30 % (n=10) were private or unemployed. In experimental group 23 samples (76.70 %) were married, were as in control group 27 (90%) were single.

2. The disease condition and dialysis information

In experimental group 43.30% (n=13) and in control group 60 % (n=18) were undergoing hemodialysis for 1-2 years. Majority of samples in both experimental group 56.70% (n=17) and control group 53.30% (n=16) were undergoing hemodialysis thrice in a week. In experimental group 53.30% (n=16) had an increased weight gain of 0.6-1 Kg. Where as in control group 40% (n=12) had an increased weight gain of 1.6-2Kg. 12samples (40%) in experimental group and 18 samples (60 %) in control group had both hypertension and diabetes, 13 samples (43.30 %) in experimental and 9 samples (30 %) in control group had hypertension. 40 %(n=12) in experimental group and 46.70 %(n=14) control group were taking treatment for both hypertension and diabetes mellitus.

3. Level of compliance in experimental and control group

In experimental group, 7th day after intervention 63.30% of samples had good compliance and 36.70% of them had average compliance, whereas in control group no changes seen after 7th day of intervention.

In experimental group, 14th day after intervention 46.70% samples had excellent compliance and 53.30% of them had good compliance, whereas in control group, no changes seen after 14th day of intervention.

4. Degree of outcome to hemodialysis

In experimental group, 7th day after intervention 33.30% samples had good outcome and 66.70% of them had excellent outcome, whereas in control group 3.30% had excellent outcome, 33.30% had good outcome and 53.30% had average outcome.

In experimental group, 14th day after intervention 73.30% samples had excellent outcome and 26.70% of them had good outcome, whereas in control group samples were remain in the good and average outcome.

5. Significant findings

There was a significant difference between the overall mean score of compliance to post hemodialysis instructions of experimental and control group after intervention, as the obtained value (t = 7th day-8.430 and 14th day-15.757) were greater than the table value (2.05) at 58 degree of freedom. Hence the research hypothesis H1 is accepted at 0.05 level of significance.

There was a significant difference between the overall mean score of overall mean score of degree of outcome to hemodialysis in experimental and control group after intervention, as the obtained value (t = 7th day-12.734 and 14th day-13.610) were greater than the table value (2.05) at 58 degree of freedom. Hence the research hypothesis H2 is accepted at 0.05 level of significance.

CONCLUSION

The findings of the study conclude that the individualized counseling has an effect on compliance to post hemodialysis instructions and outcome of hemodialysis among patients undergoing regular hemodialysis. It improves their compliance to post hemodialysis instruction and outcome in the sense of the absence of complications during the hemodialysis. It also improves the quality of life of the chronic kidney disease patients.

IMPLICATION

The findings of the study will have implication for Nursing Education, Nursing Service, Nursing Administration and Nursing Research.

Nursing practice

Hemodialysis is a life saving treatment for the chronic kidney disease patients. Non compliance to post hemodialysis instructions is the important burden faced by the nurses and other health care professionals. Strict follow up of post hemodialysis are very essential for the smooth hemodialysis treatment and prevention of the complications during and after the hemodialysis. Here is the need of a good counselor; Counseling is a primary nurse's role. The findings of the study clearly stated that the individualized counseling improved the compliance to post hemodialysis instructions and thereby reducing the complications and improve the

outcome to hemodialysis. It is important to disseminate the finding of the study into the nursing community to ensure safe, comfortable, and quality based patient care.

Nursing education

Evidence based practice is the important notion today and do hold the key in future. The nurse educator needs to equip with adequate knowledge regarding the care of the chronic kidney disease patients. The finding of the study will help to conduct individualized counseling about various problems of clients undergoing a prolonged treatment regimen, moreover adapt various methods of teaching like in service and continuing nursing education based on the reinforcement of this knowledge.

Nursing administration

Current day, the healthcare delivery system demand quality of health care. Nursing Managers are in a position to prepare polices, protocols and enhancing its use in the hospitals. Nurse administrator should conduct and coordinate in service and continuing education programmes about the role of the nurse in improving the compliance to post hemodialysis instructions.

Nursing Research

This is only an initial investigation to assess the effectiveness of individualized counseling on compliance to post dialysis instructions and outcome of dialysis. There is a need for intensive research in the area of compliance to post hemodialysis instructions. The present study may motivate the other investigators to conduct further studies.

Recommendations

1. A study can be replicated on a large larger sample for generalization of the findings.
2. A comparative study can be replicated to assess the effectiveness of individualized counseling on compliance in treatment of chronic kidney disease and other chronic systemic diseases.
3. A comparative study can be replicated to assess the effectiveness of individualized counseling on compliance to post dialysis instructions among patients undergoing hemodialysis and peritoneal dialysis.

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APPENDIX – I

LETTER REQUESTING PERMISSION TO CONDUCT THE STUDY

To

The Managing Director,
Moulana Hospital,
Perinthalmanna,
Kerala.

Respected Sir / Madam

Sub: Letter requesting permission for conducting the study.

30104603 is a post graduate nursing student of our institution. She has selected the below mentioned topic for her research project to be submitted to Dr.MGR Medical University of Health Science as a partial fulfillment of Master Nursing degree.

"A study to assess the effectiveness of individualized counseling on compliance to post dialysis instructions and outcome of hemodialysis among patients undergoing regular hemodialysis in a selected hospital at Kerala.".

Regarding this project, she is in need of your esteemed help and co-operation as she is interested in conducting a study of her project in your hospital. I request you to kindly permit her to conduct the proposed study and provide her the necessary facilities.

The student will furnish further details of the study if required personally. Please do the needful and oblige.

Thanking You

Yours Faithfully,

Place:
Date: Principal

Phone: 04933-300600
Fax: 04933-228011
Website: http//www.moulanahospital.com
E-mail : mail@moulanahospital.com

Moulana HOSPITAL

P.B.No: 31, OOTTY ROAD, PERINTALMANNA-679 322, Malappuram Dist., Kerala

01.10.2011

CERTIFICATE

This is to certify that **Ms. Fousiya Beegum.T.K,** Second Year M.Sc Nursing student, RVS College of Nursing, Sulur, Coimbatore District, Tamil Nadu State , has successfully completed her research study on topic "A study to assess the effectiveness of individualized counselling on compliance to post instructions and out come of hemodiaysis among patients undergoing regular hemodialysis" in the department of Dialysis from 25.08.2011 to 24.09.2011.

This is an ISO 9001 : 2008 certified Multispeciality Referral Hospital having 500 beds catering to 3 million population. This hospital provides basic care and also advanced trauma care. It has all the wings of Medical and Surgical specialities, IVF and ICSI lab, Hip and Knee Replacement surgery Cardiothoracic surgery , Renal Transplant Surgery & Metabolic & Bariatric Surgery with all modern and advanced equipments like Spiral CT Scan, Cath Lab, Colour Doppler etc.

She has attained considerable exposure in the subject during her project study.

Her character and conduct are Good.

For **MOULANA HOSPITAL**

01.10.2011

SAITHU MUHAMED.V.M
ADMINISTRATOR

Moulana HOSPITAL - PERINTALMANNA

MH/LH/01

APPENDIX – II

PERMISSION LETTER FOR CONTENT VALIDITY

From

30104603

II Year MS,c Nursing

R.V.S College of Nursing,

R.V.S Institute of Health Sciences,

Sulur, Trichy road, Coimbatore.

To

Through the Principal

Respected Madam / Sir

Sub: Request for opinions and suggestions of experts for establishing content validity of research tool.

I am a Master of Nursing student in RVS College of Nursing, Sulur in the Speciality of Medical Surgical nursing. As per the requirement for the partial fulfillment of the Master of Nursing degree under the Tamil Nadu Dr.MGR Medical University, I have selected the following topic for dissertation.

"A study to assess the effectiveness of individualized counseling on compliance to post dialysis instructions and outcome of hemodialysis among patients undergoing regular hemodialysis in a selected hospital at Kerala."

I humbly request you to kindly validate the tool and give your valuable suggestions.

Thanking You

Yours sincerely

30094601

Enclosures1. Statement of the problem
2. Objectives of the study
3. Hypothesis of the study
4. Research tool
5. Criteria rating for validation
6. Content validation certificate.

APPENDIX – III

CERTIFICATE OF CONTENT VALIDITY

This is to certify that tool developed by 30104603, MSc Nsg II year student, R.V.S. College of Nursing, Sulur, Coimbatore to collect data on the problem.

"A study to assess the effectiveness of individualized counseling on compliance to post dialysis instructions and outcome of hemodialysis among patients undergoing regular hemodialysis in a selected hospital at Kerala."

is validated by the undersigned and she can proceed with this tool to conduct the main study.

Name and Address :

Signature :

Seal :

Date :

APPENDIX – IV

CRITERIA RATING SCALE FOR TOOL VALIDATION

Kindly go through this tool; please give your views regarding scoring, content, language and practicability.

Interpretation of the scale: Column I – Meets the criteria; Column II – Partially meets the criteria; Column III – Doesn't meet the criteria

S.No	Criteria	I	II	III	Remarks
1.	**Scoring**				
	- Appropriateness				
	- Adequacy				
	- Accuracy				
	- Clarity				
	- Simplicity				
2.	**Content**				
	- Organization				
	a) Logical sequence				
	b) Continuity				
	- Adequacy				
	- Appropriateness				
	- Relevance				
3.	**Language**				
	- Appropriateness				
	- Clarity				
	- Simplicity				
	- Concise				

	- Precision				
4.	**Practicability**				
	- Is it easy to score				
	- Precisely measure the skill				
	- Utility				

Suggestions :

Signature :

Name :

Designation :

APPENDIX-V

REQUISITION LETTER FOR CO-GUIDE

From

30104603,
Second year M.Sc Nursing,
RVS College Of Nursing,
Sulur, Coimbatore.

To

Through the Principal

Respected sir

Sub : Request for Co-Guide

I wish to state that I am M.Sc (N) II year student of RVS College Of Nursing. I have selected the below mentioned topic for dissertation as a partial fulfillment of the Master of Nursing Degree to the Tamil Nadu Dr. M.G.R Medical university.

"A study to assess the effectiveness of individualized counseling on compliance to post dialysis instructions and outcome of hemodialysis among patients undergoing regular hemodialysis in a selected hospital at Kerala."

Regarding this I am in need of your valuable help and cooperation by providing services to be a Co-Guide for my study.

I humbly request your goodself to consider the same and do the needful.

Thanking you, Yours sincerely

30104603

Place:

Date:

APPENDIX-VI

RESEARCH TOOL

INTERVIEW SCHEDULE TO ASSESS THE COMPLIANCE TO POST DIALYSIS INSTRUCTIONS

INTRODUCTION:-

Hemodialysis is a common treatment for patients with kidney disease. Each client should follow the instructions which given after each hemodialysis. Following of these instructions help them you to go through the dialysis with out much discomforts or complications.

PURPOSE:-

The purpose of this interview is to find out how far you are following the instructions given after dialysis.

INSTRUCTIONS:-

1. Kindly give your free and frank answer to the questions.
2. Your answer will be kept confidential
3. Please Mark '√' for the exact answer.

SECTION – A

DEMOGRAPHIC DATA

1. Identification Code:-

2. Age:

a.25 – 35 years ☐
b.36 – 45 years ☐
c.46 – 55 years ☐
d. 56– 65 years ☐
e. More than 66 years ☐

3. Sex

a. Male ☐
b. Female ☐

4. Educational status

a. No schooling ☐
b. Primary School ☐
c. High school ☐
d. Higher Secondary school ☐
e. Graduate ☐

5. Occupation

a. Farmer ☐
b. Laborer ☐
c. Private employee ☐
d. Government Employee ☐
e. Unemployed ☐

7. Marital Status

a. Single ☐
b. Married ☐
c. Widower ☐
d. Separated ☐

8. Presence of any other systemic disease

- a. Hypertension ☐
- b. Diabetes Mellitus ☐
- c. Both ☐
- d. None ☐
- e. Any other, specify ☐

9. Since how long are you undergoing dialysis

- a.1 – 6 months ☐
- b. 6 months to 1 year ☐
- c.1 – 2 years ☐
- d. More than 2 year ☐

10. Number of dialysis per week

- a. Daily ☐
- b. Thrice in a week ☐
- c. Twice in a week ☐
- d. Once in a week ☐

11. Types of drug currently taken.

- a. Hypertensive Drug. ☐
- b. Diabetic Drug. ☐
- c. Both ☐
- d.None ☐
- e. Any other, specify ☐

12. Weight gain in between two dialysis.

- a. 0-0.5 Kg ☐
- b. 0.6 -1 Kg ☐
- c. 1.1-1.5Kg ☐
- d. 1.6-2 Kg ☐
- e. 2.1-2.5Kg ☐
- f. More than 2.6 Kg ☐

Weight of the client

Pre test O1	Post test	
	O2 (7th day after intervention)	O3 (14th day after intervention)

Blood Pressure.

Sl no	Types of observations.	30 mts	1hr	1.30 hrs	2 hrs	2.30 hrs	3hrs	3.30 hrs	4hrs
1.	Pre test								
2.	1st observation.								
3.	2nd observation.								

SECTION – B

RATING SCALE TO ASSESS THE COMPLIANCE TO POST DIALYSIS INSTRUCTIONS

INSTRUCTIONS: - Kindly give information to the questions. Please give '√' for exact answer, Guideline for answers are,

1: Always : Follow as prescribed.

2: Often : Follow but not full times.

3: Some times : Follow some times.

4: Not at all : Not follow as prescribed

Sl no	**Statement**	**Pre test O1 (on the day of dialysis)**				**Post test**							
						O2 (7^{th} day after observation)				**O3 (14^{th} day after observation)**			
		1	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**
I.	**DRUG AND FOLLOW UP**												
1.	Do you undergo dialysis regularly as prescribed.												
2.	Do you undergo prescribed period of dialysis.												
3.	Do you take medications in regular time.												
4.	Do you take drugs without the prescription of the Doctor.												
5.	If you are a hypertensive patient, Do you stop hypertensive drugs on the day of dialysis.												
6.	If you are a diabetic patient, Do you continue diabetic drugs.												

II.	**FLUID RESTRICTIONS**												
1.	Do you follow the prescribed fluid restriction.												
2.	Do you maintain fluid intake chart.												
3.	Do you take fruits other than prescribed.												
III.	**DIET RESTRICTIONS**												
1.	Do you take the types of diet as prescribed.												
2.	Do you follow prescribed number of time of diet in a day.												
3.	Do you take prescribed amount of salt in a day.												
4.	Do you keep a daily food diary.												
5.	Do you take vitamin D supplementation as prescribed.												
IV.	**EXERCISE FOR PATENCY OF AV FISTULA**												
1.	Do you practice any exercise to maintaining the patency of fistula.												
2.	Do you take exercise as prescribed .												

SECTION – C

CHECKLIST TO ASSESS OUTCOME OF DIALYSIS

PURPOSE:

The purpose of this checklist is to find out any problems or discomfort that you feel during dialysis.

INSTRUCATIONS:-

1. Kindly give your free and frank answer to the questions.
2. Your answer will be kept confidential
3. Please Mark '√' for the exact answer.

Sl no	problems	Pre test O1 (on the day of dialysis)			Post test O2 (7th day after intervention)			Post test O3 (14th day after intervention)		
		Present	Absent	Remark	Present	Absent	Remark	Present	Absent	Remark
1.	Hypotension.									
2.	Bleeding.									
3.	Hypersensitivity reaction.									
4.	Restlessness.									
5.	Pruritus/itching/dry skin.									

6.	Confusion.									
7.	Disorientation.									
8.	Seizure.									
9.	shortness of breath									
10.	Nausea									
11.	Vomiting.									
12.	Blurred vision.									
13.	faintness or dizziness									
14.	lack of appetite									
15.	numbness in the hands or feet									
16.	Muscle cramps.									

Sl no	Statement	Very comfortable	Some what comfortable	Not at all comfortable
17.	How did you feel going through the dialysis			

RESEARCH TOOL MALAYALAM

A`napJkw`mjWw

BapJw:

hr¡tcmKnIÄ¡v sNbvXphcp¶ Hcp {][m\ NnInÕmcoXnbmWv lotamUbmenkv. HmtcmtcmKnbpw Ubmenkn\v tijw \ÂIp¶ \nÀt±i§Ä \nÀ_Ôambpw]ment¡-XmWv. AXv aqew Ubmenknkv kpJIchpw `hnj¯pIÄ Ipdª Xpw Bbncn¡pw.

ef yw:

Ubmenkn\v tijw \ÂIp¶ \nÀt±i§Ä \n§Ä F{X am{Xw]men¡p¶p-v F¶v a\Ênem¡p¶Xn\v th-nbmWv Cu IqSn¡mgvN.

\nÀt±i§Ä:

1. Cu tNmZymhenbnse Hmtcm tNmZyhpw {i²m]qÀÆw hmbn¨v \n§fpsS tXm¶epIÄkzbw]cntim[n¨vGähpwtbmPn¡p¶ D¯cwASbmfs¸Sp¯pI.
2. \n§fpsS hnhc§Ä kXykÔambn kq£n¡p¶XmWv.
3. Icnbmb D¯c¯n\v √ASbmfs¸Sp¯pI.

`mKw. F

hniZhnhc§Ä

1. tImUv \¼À
2. hbÊv

F) 25þ35 hÀjw ☐

_n) 36þ 45 hÀjw ☐

kn) 46þ 55 hÀjw ☐

Un) 56þ 65 hÀjw ☐

C) 66 hÀj¯nÂIqSpXÂ ☐

3. enwKw

F)]pcpj³

_n) kv{Xo

4. hnZym`ymktbmKyX

F) \nc£c³

_n) {]m[anI hnZym`ymkw

kn) sk¡-dn hnZym`ymkw

Un) DbÀ¶ kvIqÄ hnZym`ymkw

C) _ncpZw

5. tPmen

F) Irjn

_n) sXmgnemfn

kn) kzImcy tPmen

Un) kÀ¡mÀ tPmen

C) tPmen CÃm¯Xv

7. hnhmlw

F) AhnhmlnXÀ

_n) hnhmlnXÀ

kn) hn[h

Un) hnhmltamN\w

8. imcocnIamb AkpJ§Ä

F) cIvXk½À±w

_n) {]talw

kn) c-pw

Un) H¶pw CÃ

C) thsd Fs´¦nepw

9. F{X Imeambn \n§Ä Ubmenknk v sN¿p¶p

F) 1þ6 amkw ☐

_n) 6 amkw apXÂ Hcp hÀjw hsc ☐

kn) 1þ2 hÀjw ☐

Un) c-v hÀj¯n\v tase ☐

10. \n§Ä BgvNbnÂ F{X Ubmenknkv sN¿p¶p.

F) Znhkhpw ☐

_n) BgvNbnÂ aq¶v Znhkw ☐

kn) BgvNbnÂ c-v Znhkw ☐

Un) BgvNbnÂ Hcn¡Â ☐

11. \n§Ä Ct¸mÄ Ign¨v sIm-ncn¡p¶ acp¶pIÄ.

F) càk½À±¯n\pÅXv ☐

_n) {]tal¯n\pÅXv ☐

kn) c-pw ☐

Un) Hcp acp¶pw Ign¡p¶nÃ ☐

C) thsd acp¶pIÄ

12. c-v UbmenkpIÄ¡nSbnse `mc hnXymkw

F) 0þ0.5Intem ☐

_n) 0.6þ1 Intem ☐

kn) 1.1þ1.5 Intem ☐

Un) 1.6þ2 Intem ☐

C) 2.1þ2.5 Intem ☐

F^v) 2.6 IntembnÂIqSpXÂ

tcmKnbpsS `mcw

{]Ya]co£	Iu¬knen§n\v tijapÅXv	
	7þmw Znhkw	14þmw Znhkw

cãk½À±w

{Ia \¼Ä	hnhn[coXnIÄ	30 an\näv	1 aWniqÀ	1.30 aWniqÀ	2 aWniqÀ	2.30 aWniqÀ	3 aWniqÀ	3.30 aWniqÀ	4 aWniqÀ
1	{]Ya]co£								
2	7þmw ZnhkapÅ]co£								
3	14þmw ZnhkapÅ]co£								

`mKw. _n

Ubmenknkn\v tijapÅ \nÀt±i§fpsS BÚm\phÀ¯nXzw

\nÀt±i§Ä

HmtcmtNmZy¯n\pw \n§fpsStXm¶epIÄASbmfs¸Sp¯pI.

D¯ckqNnI

1. FÃmbnt¸mgpw : \nÀt±in¨ t]mse]n³XpScp¶p
2. A[nIkabhpw : \nÀt±in¨ t]mse]n³XpScp¶p,]t£ FÃmkabhpwCÃ
3. Nnekab§fnÂ : Nnekab§fnÂ
4. Hcn¡epwCÃ : \nÀt±in¨Xv t]mse]n³XpScp¶nÃ

{Ia \¼À	{]kvXmh\	{]Ya]co£				Iu¬knen§n\v tijapÅ]co£							
						7þmw Znhkw				14þmw Znhkw			
		1	2	3	4	1	2	3	4	1	2	3	4
A	**\nÀt±in¨ acp¶pIfpwXpSÀNnInÂkbpw**												
1	\n§ÄtUmIvSÀ \nÀt±in¨Xv t]mse Øncambn Ubmenknkv sN¿mdpt-m												
2	\n§Ä Hmtcm Ubmenknkpw tUmIvSÀ \nÀt±in¨ kabw sN¿mdpt-m												
3	\n§Ä Øncambn acp¶ vIgn¡mdpt-m												
4	tUmIvSdpsS \nÀt±ianÃmsX \n§Ä acp¶v Ign¡mdpt-m												

5	\n§Ä càk½À²¯n\pÅ acp¶pIÄ Ubmenknkv Znhkhpw Ign¡mdpt-m												
B	**Pe\nb{´Ww**												
1	\n§Ä \nÀt±in¨ Pe¯nsâAfhv]n³XpScmdpt-m												
2	\n§Ä D]tbmKn¨ shÅ¯nsâ Afhv FgpXn kq£n¡mdpt-m												
3	\n§Ä \nÀt±in¨XÃm¯]g§Ä Ign¡mdpt-m												
C	**`£W\nb{´Ww**												
1	\n§Ä \nÀt±in¨ coXnbnepÅ `£Ww]n³ XpScmdpt-m												
2	\n§Ä Hmtcm Znhkhpw \nÀt±in¨{X XhW `£Ww Ign¡mdpt-m												
3	\n§Ä Hmtcm Znhkhpw \nÀt±in¨{X Afhv am{Xw D¸v D]tbmKn¡mdpt-m												
4	\n§Ä `£W-Ubd nkq£n¡mdpt-m												
5	\n§Ä \nÀt±in¨ Afhv hnäman³ Un]n³XpScmdpt-m												
D	**^nkväpebpsS icnbmb {]hÀ¯\¯n\pÅ hymbmaw**												
1	\n§Ä ^nkväpebpsSicnbmb {]hÀ¯\¯n\v Fs´¦nepw hymbmaw sN¿mdpt-m												
2	\n§Ä tUmIvSÀ \nÀt±in¨ hymbmaw icnbmbn sN¿mdpt-m												

APPENDIX-VII

ACTION PLAN

INTRODUCTION:-

Hemodialysis is the common treatment for patients with kidney disease. Each client should follow the instructions which was given after each hemodialysis. Strict follow up of these instructions helps the dialysis become more easier and prevent complications.

1ST STEP

- Introduced the sample and explained the purpose of the study and collected baseline information (demographic data).
- Pretest conducted by using interview schedule before dialysis.
- Check predialysis blood pressure and weight of the sample.

2nd STEP

During the time of the dialysis, the investigator observed the samples frequently to identify presence or absence of complications. Blood pressure was monitored every half an hour to rule out hypotension.

3rd STEP

After the dialysis treatment, post hemodialysis instructions are identified from the medical records and counseling session was conducted, based on a well structured counseling plan regarding the aspects of post hemodialysis instructions like, drug and follow up, fluid restrictions, diet restrictions and exercise for patency of fistula. The clients were encouraged to strictly follow the post hemodialysis instructions. The clients in the control group were also taught and allowed to clarify their doubts after the data collection was over, for their benefits. Post test conducted on the 7th and 14th after intervention in experimental group. In control group baseline data collected and subsequent observations are conducted on the 7th and 14th day without counseling.

COUNSELLING PLAN

Hemodialysis is a method used to treat ESRD, in which blood passed through a machine that purifies and return in to the body. Most of the patient undergone dialysis has complications like hypotension, increased weight gain, improper fistula exercises etc. It is due to the ignorance of post dialysis instructions. Periodic individualized counseling will improve the compliance to post dialysis instructions.

Periodic counseling will improve the acceptance of patients to post dialysis instructions. So it is a vital responsibility of the nurse to counsel the patient to follow up the post dialysis instructions. For this counseling session the investigator planned to provide counseling regarding drug and follow up, fluid restrictiosn, diet restrictions and exercise for the patency of AV fistula.

STEPS:

The steps of this counseling session includes,

1. Developing a rapport.
2. Making an informed assessment.
3. Reinforcement.
4. Termination and follow up.

1. Developing a rapport

In this session the investigator introduced herself and informed the client regarding the purpose of counseling. In order to develop positive helping relationships with the client. The investigator also explained regarding the dialysis, need to reduce the complications during and after dialysis, important measures that the client strictly follow in home etc. Basic informations (demographic data) of the patient is also collected in this phase.

2. Making an informed assessment.

In this session, the investigator assessed the basic instructions that the patient

Strictly follows after each hemodialysis. Pre test will be conducted by using interview schedule. It includes compliance to post hemodialysis instructions regarding drug and follow up, fluid restrictions, diet restrictions and exercise for the patency of AV fistula. The investigator also identified the post dialysis instructions to each patient and based on that the goals formulated.

3. Reinforcement.

In this session, the investigator planned to implement the preset goals. The counseling focused on different aspects of dialysis which includes,

- Drug and follow up
- Fluid restrictions
- Diet restrictions
- Exercise for the patency of AV fistula

4. Termination and follow up.

This is the last session, and in this session, the investigator planned to terminate the counseling session and instruct the client to strictly follow these instructions.

APPENDIX-IX

FREQUENCY AND PERCENTAGE DISTRIBUTION OF EXPERIMENTAL AND CONTROL GROUP SAMPLES ACCORDING TO OUTCOME CRITERIA OF HEMODIALYSIS BEFORE INTERVENTION

N=60

Sl no	Criteria	Experimental group N=30				Control group N=30			
		Present		Absent		Present		Absent	
		F	%	F	%	F	%	F	%
1.	Hypotension	16	53.3	14	46.70	15	50.00	15	50.00
2.	Bleeding	24	80.00	6	20.00	6	20.00	24	80.00
3.	Hypersensitivity reaction	26	86.70	4	13.30	10	33.30	20	66.70
4.	Restlessness	27	90.00	3	10.00	15	50.00	15	50.00
5.	Pruritus/itching/dry skin	10	33.30	20	66.70	15	50.00	15	50.00
6.	Confusion	7	23.30	23	76.70	13	43.30	17	56.70
7.	Disorientation	7	23.30	23	76.70	14	46.70	16	53.30
8.	Seizure	1	03.30	29	96.70	2	06.70	28	93.30
9.	Shortness of breath	1	03.30	29	96.70	2	06.70	28	93.30
10.	Nausea	19	63.30	11	36.70	18	60.00	12	40.00
11.	Vomiting	16	53.30	14	46.70	19	63.30	11	36.70
12.	Blurred vision	13	43.30	17	56.70	17	56.70	13	43.30
13.	Faintness or dizziness	17	56.70	13	43.30	21	70.00	9	30.00
14.	Lack of appetite	15	50.00	15	50.00	22	73.30	8	26.70
15.	Numbness in the hands or feet	14	46.70	16	53.30	16	53.30	14	46.70
16.	Muscle cramps	10	33.30	20	66.66	17	56.70	13	43.30

Table shows the frequency and percentage distribution of experimental and control group sample according to the outcome criteria of hemodialysis in different aspects before intervention.

APPENDIX-X

FREQUENCY AND PERCENTAGE DISTRIBUTION OF EXPERIMENTAL AND CONTROL GROUP SAMPLES ACCORDING TO OUTCOME CRITERIA OF HEMODIALYSIS ON 7TH DAY AFTER INTERVENTION

N=60

Sl no	Criteria	Experimental group N=30				Control group N=30			
		Present		Absent		Present		Absent	
		F	%	F	%	F	%	F	%
1.	Hypotension.	12	40.00	18	60.00	25	83.30	5	16.70
2.	Bleeding.	-	-	30	100.00	2	6.70	28	93.30
3.	Hypersensitivity reaction	6	20.00	24	80.00	4	13.30	20	86.70
4.	Restlessness.	15	50.00	15	50.00	22	73.30	8	26.70
5.	Pruritus/itching/dry skin	8	26.70	22	73.30	8	26.70	22	73.30
6.	Confusion.	1	3.30	29	96.70	10	33.30	20	66.70
7.	Disorientation.	1	3.30	29	96.70	6	20.00	24	80.00
8.	Seizure.	1	3.30	29	96.70	7	23.30	23	76.70
9.	Shortness of breath	1	3.30	29	96.70	7	23.30	23	76.70
10.	Nausea	2	06.70	28	93.30	13	43.30	17	56.70
11.	Vomiting	2	06.70	28	93.30	14	46.70	16	53.30
12.	Blurred vision.	3	10.00	27	90.00	22	73.30	8	26.70
13.	Faintness or dizziness	8	26.70	22	73.30	22	73.30	8	26.70
14.	Lack of appetite	9	30.00	21	70.00	28	93.30	2	06.70
15.	Numbness in the hands or feet	18	60.00	12	40.00	16	53.30	14	46.70
16.	Muscle cramps	9	30.00	21	70.00	15	50.00	15	50.00

Table shows the frequency and percentage distribution of experimental and control group sample according to outcome criteria of hemodialysis on 7th day after intervention.

APPENDIX-XI

FREQUENCY AND PERCENTAGE DISTRIBUTION OF EXPERIMENTAL AND CONTROL GROUP SAMPLES ACCORDING TO OUTCOME CRITERIA OF HEMODIALYSIS ON 14TH DAY AFTER INTERVENTION

N=60

Sl no	Criteria	Experimental group N=30				Control group N=30			
		Present		Absent		Present		Absent	
		F	%	F	%	F	%	F	%
1.	Hypotension.	5	16.70	25	83.30	20	66.70	10	33.30
2.	Bleeding.	4	13.30	26	86.70	-	-	30	100.00
3.	Hypersensitivity reaction	6	20.00	24	80.00	10	33.30	20	66.70
4.	Restlessness.	-	-	30	100.00	10	33.30	20	66.70
5.	Pruritus/itching/dry skin	2	06.70	28	93.30	11	36.66	19	63.33
6.	Confusion.	-	-	30	100.00	14	46.70	16	53.30
7.	Disorientation.	3	10.00	27	90.00	12	40.00	18	60.00
8.	Seizure.	-	-	30	100.00	15	50.00	15	50.00
9.	Shortness of breath	-	-	30	100.00	15	50.00	15	50.00
10.	Nausea	8	26.70	22	73.30	13	43.30	17	56.70
11.	Vomiting	6	20.00	24	80.00	19	63.30	11	36.70
12.	Blurred vision.	9	30.00	21	70.00	19	63.30	11	36.70
13.	Faintness or dizziness	20	66.70	10	33.30	17	56.70	13	43.30
14.	Lack of appetite	7	23.30	23	76.70	19	63.30	11	36.70
15.	Numbness in the hands or feet	4	13.90	26	86.70	10	33.30	20	66.70
16.	Muscle cramps	10	33.0	20	66.70	19	63.30	11	36.70

Table shows the frequency and percentage distribution of experimental and control group sample according to outcome criteria of hemodialysis 14th day after intervention.

APPENDIX-XII

CERTIFICATE OF ENGLISH EDITING

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09th February 2012

Coimbatore

From

Dr. Sheila Jayaraj
Head, Department of English
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Sulur, Coimbatore

To

The Principal
RVS College of Nursing
Sulur, Coimbatore

Dear Madam,

This is to certify that I have edited and corrected the thesis given to me by Fousiya Beegum T.K., II M.Sc. Nursing. The corrected copy is handed over to the said student accordingly.

Yours sincerely,

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APPENDIX-XIII

REPORT OF SELF ANALYSIS DONE TO RULE OUT PLAGIARISM

USING THE SOFTWEAR 'PLAGIARISM DETECTOR'

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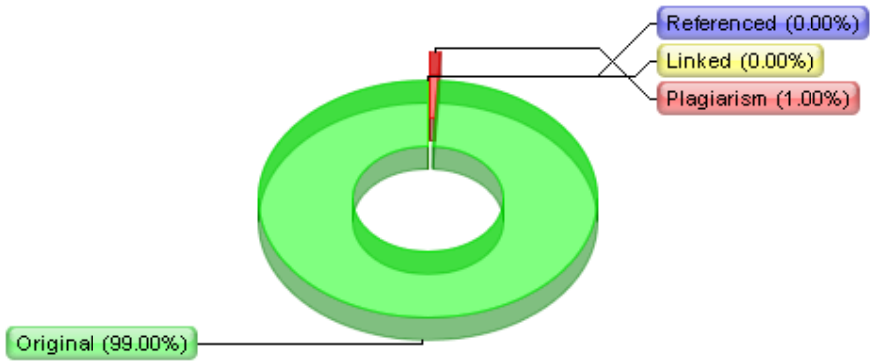

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